



ESTABLISHED 1858.

Subscription: Fourpence a Week, Ten Shillings a Year.
Summer and Winter Numbers 1s. per Copy.

CHIEF OFFICES: 42 CANNON STREET, LONDON, E.C.
BRANCH OFFICES: 231 ELIZABETH STREET, MELBOURNE,
VICTORIA, AND EMPIRE CHAMBERS, YORK STREET,
SYDNEY, N.S.W.

As an Official Journal

THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—

Pharmaceutical Society of Ireland.
South African Pharmaceutical Association.
Pharmaceutical Society of Natal.
Central Pharmaceutical Association of N.Z.
Otago Pharmaceutical Association.
Pharmaceutical Society of Queensland.
Pharmaceutical Society of South Australia.
Pharmaceutical Society of Tasmania.
Pharmaceutical Society of Western Australia.

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OUR 1897 DIARY.

THIS work is now in course of preparation. The publisher wishes us to state that he is now booking advertisement orders for it, and we think it more too soon for business-houses to give him their instructions. We would remind them that THE CHEMISTS' AND DRUGGISTS' DIARY has certain points of exceptional merit as an advertising medium to the drug-trade; *first*, all subscribers to this journal at home and abroad receive copies of it; *second*, it is used daily in many thousands of pharmacies throughout the world, therefore the advertisements speak daily; and *third*, the whole of the articles advertised are indexed in The Buyers' Guide—this being regarded by the trade in all its branches as one of the most useful and business-promoting compilations ever attempted.

Summary.

THE Pharmaceutical Society of Ireland has attained its majority (p. 447).

WE give a sketch on p. 455 of Mr. Alpers's apparatus for filling gelatine capsules.

OUR legal adviser's opinion regarding the dental controversy is printed on p. 459.

THE Pasteur Institute of India is blossoming into a full-blown bacteriological affair (p. 448).

FRENCH pharmacists wish to get the sale of mineral waters into their own hands (p. 415).

Truth makes another dig at the drug-trade and at us. We have pleasure in replying on p. 461.

A DOCTOR'S young wife has died from the effects of a pyrogallic-acid solution taken in error (p. 445).

FORMULE and hints are numerous in this issue, and are chiefly in reply to queries by subscribers (p. 469).

AN explosion of acetylene at Lyons may help to impress those who think that the gas is not dangerous (p. 447).

THE remarkable story of an earl's niece who is supposed to have run away with a cat-doctor (erstwhile chemist) is told on p. 446.

OUR reporter at Prague gives further details regarding this the most notable pharmaceutical exhibition of modern times (p. 450).

THE American notices on p. 454 are on matters which interest every reader—viz., how to improve the shop, and how to push trade.

ARGON and helium are elements, but not chemical elements, Dr. Mond says, and Mr. Crookes seems to have the same idea (p. 462).

THOSE who want the latest information regarding the rose-crop and the prices of the new otto will find it in the Editorial article on p. 460.

DR. CYRUS EDSON, of New York, has had some trouble with the people who make his ammonol, and they have made things look bad for him (p. 449).

OUR analytical students got a mixture containing an insoluble phosphate (calcium) and an iron salt, so half of them missed the calcium (p. 444).

THE Inland Revenue authorities seem to be making another onslaught upon botanic beers which contain too much alcohol. We report a case on p. 447.

A LETTER from the Privy Council Office states that the question of restrictions on the sale of carbolic acid is under the consideration of the Lords of the Council (p. 462).

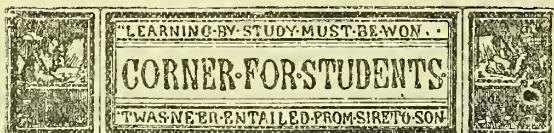
MR. JOHN C. UMNEY and several other correspondents supply us with the particulars regarding orange-wine which we inquired for. They corroborate Brande's observation, old though it is (p. 468).

IT turns out that Mr. Dee, the South London druggist whom Mr. Coroner Hicks censured last week, was in no way to blame for the death of the man who took belladonna liniment. Mr. Dee did not prescribe for him (p. 445).

THE Queensland Pharmaceutical Society wish to get combined colonial action to promote reciprocity of diplomas with the Pharmaceutical Society of Great Britain. They have forgotten that we have two Societies at home (p. 449).

SIR JOSEPH LISTER, the eminent surgeon, opened the British Association meeting at Liverpool on Wednesday evening with an address upon his discovery of antiseptic surgery and its results. He spoke also about various antitoxic cures, and we summarise his address on p. 456.

DR. LUDWIG MOND, in his capacity as President of the Chemical Section of the British Association, has spoken on the history of chlorine-manufacture, tracing its progress from its introduction into this country by James Watt to the present electrolytic endeavours. He seems to have little faith in the latter (p. 453).



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Wednesday, September 23, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, October 3. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

REPORTS.

The powder distributed for analysis last month consisted of 1 part of calcium phosphate, 1 part of ammonio-ferrous sulphate, and 2 parts of magnesium carbonate. Its calculated composition was—

Fe	..	..	..	..	..	3.57
Ca	..	..	..	..	..	9.68
Mg	..	..	..	..	..	12.57
NH ₄	..	..	..	..	..	2.23
P ₂ O ₅	..	..	..	..	..	15.32
SO ₄	..	..	..	..	..	12.25
CO ₃	..	..	..	..	..	23.56
O	..	..	..	..	..	20.9
H ₂ O	..	..	..	..	..	18.67
						100.00

Samples of the powder were sent to 50 applicants, and in reply 29 reports of analyses were sent in.

The failures in the detection of the several constituents were:—Calcium, 14; the phosphoric radicle, 9; ammonium, 5; iron, 2; magnesium, 2; the sulphuric radicle, 1; and the carbonic radicle, 0.

The difficulty in this case arose from the presence of a salt insoluble in water, and which was precipitated from its acid solution on the addition of an alkali. In this way calcium phosphate was precipitated along with iron phosphate when ammonium hydrate was added to the acid solution of the powder. The whole of the calcium was not precipitated as phosphate, because there was iron present, and all the iron combined with the quantity of the phosphoric radicle required to convert it into ferric phosphate, thus liberating an equivalent quantity of calcium, which passed into solution probably as chloride. When the filtrate from ammonium hydrate was treated with ammonium carbonate there was a slight precipitate produced after warming; this contained the calcium corresponding to the iron which had been converted into phosphate. Calcium thus appeared in two separate groups in the analysis. This circumstance led some of our correspondents to under-estimate the quantity of calcium in the powder.

For particulars of the method to be adopted for the examination of the precipitate produced by ammonium hydrate

in the presence of phosphates insoluble in water, we must refer our correspondents to their text-books. It is well to remind those whose experience is limited that accurate results in the analysis of such mixtures are not to be obtained without practice.

PRIZES.

The First Prize for the best analysis has been awarded to

JAMES THOMPSON, care of Mr. F. N. Whitehead, Exchange Pharmacy, Blackburn.

The Second Prize has been awarded to

B. A. WOODS, care of Messrs. Briggs & Gamble, Chemists, Grantham.

MARKS AWARDED FOR ANALYSES.

J. Thompson (1st prize)	..	100	Lignum	..	..	..	..	..	70
B. A. Woods (2nd prize)	..	98	Fest	..	..	..	..	..	69
H. W. J. B.	..	..	97	Veui, Villi, Vici	..	..	..	..	67
Cumbriana	..	..	96	Ne Plus Ultra	..	..	..	..	66
Ephemeris	..	..	94	Minimum	..	..	..	..	65
Huxley	..	..	94	Ne M'eu Veut Pas	..	..	..	..	63
C. L. Packham	..	..	93	First Attempt	..	..	..	..	63
J. H. C.	..	..	92	Scipio	..	..	..	..	62
Japonica	..	..	91	Panax	..	..	..	..	61
Lamel	..	..	90	Justitia	..	..	..	..	60
Constat	..	..	88	H. O. O.	..	..	..	..	58
Lilac	..	..	85	Gametophyte	..	..	..	..	55
Rita	..	..	80	Nil Desperandum	..	..	..	..	50
Aenaeas	..	..	75	Ozone	..	..	..	..	30
Elemi	..	..	73						

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

JAPONICA.—You detected calcium, but omitted to mention it in summarising your results.

LAMEL.—The sodium hydrate you used in testing for aluminium may have contained that metal as an impurity: it is not uncommonly found in commercial caustic soda. Pure sodium hydrate may be prepared by the action of sodium on water.

CONSTAT.—See remarks to "Lamel."

LILAC.—The powder imparted a very marked colour to the Bunsen flame especially after moistening with hydrochloric acid.

RITA.—You should have been able to detect one-tenth of the quantity of ammonium with ease. It was only necessary to mix a little of the powder with dry calcium hydrate in a watch-glass covered with a glass to which a small piece of moistened red litmus-paper adhered. On slightly moistening the powder ammonium was evolved, and turned the litmus-paper blue. The quantity of water used should be barely sufficient to convert the mixture into a thick paste: a larger quantity of water would hinder the volatilisation of the ammonia.

AENAEAS.—Magnesium was present in quantity. If you employed very little hydrochloric acid to dissolve the powder, and added very little ammonium chloride afterwards, the precipitate thrown down by ammonium hydrate would contain some magnesia; but enough remained in solution to admit of its detection in the filtrate from the ammonium carbonate precipitate.

ELEMI.—See remarks to "Rita."

LIGNUM.—Such a large quantity of the phosphoric radicle ought not to have escaped detection. A decided excess of ammonium-molybdate solution must be employed. The best plan is to take about 2 c.c. of the reagent in a test-tube, and add to it 1 drop of the solution to be tested; then warm to about 90° C. If no precipitate appears in five minutes, you may then add more of the solution under examination gradually, drop by drop, until you have used about 1 c.c., and again warm. If no yellow crystalline precipitate appears after about fifteen minutes, you may conclude that there is no phosphate present. To make sure that the conditions were favourable for the precipitation of the phosphoric radicle, add one drop of solution of sodium phosphate: a precipitate should appear immediately.

FEST.—You must have mismanaged the molybdate test. Try what is the smallest quantity of phosphate that you can detect. See remarks to "Lignum."

VENT, VIDI, VICI.—You omitted particulars of the test by which said demonstrated the absence of calcium phosphate.

NE PLUS ULTRA.—You referred only to two acid radicles, and cannot claim to have demonstrated the absence of the others.

MINIMUM.—You detected a sulphate, and found that the powder was soluble in dilute hydrochloric acid, so barium could not have been present.

NE M'EN VEUT PAS.—The precipitate you obtained with tartaric acid was probably magnesium tartrate, a crystalline salt sparingly soluble in water.

FIRST ATTEMPT.—The first indication of calcium was the flame-coloration: it was too red for sodium. The method you adopted should have given a complete separation of the phosphoric radicle from calcium, if properly carried out. You should practise the operation until you can succeed in getting all the phosphoric acid in the precipitate in combination with iron, and all the calcium in the filtrate.

SCIPIO.—The presence of a phosphate insoluble in water rendered a special method of analysis necessary. You must consult your text-book for full information as to the course to be adopted under such circumstances.

PANAX.—The precipitate produced on adding barium chloride to the solution prepared by boiling the powder with sodium carbonate was not all soluble in dilute hydrochloric acid: the insoluble part was barium sulphate.

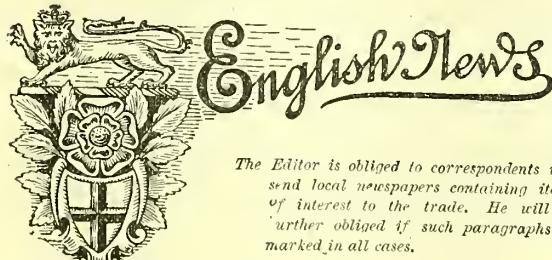
JUSTITIA.—When you added ammonium acetate and acetic acid, and boiled, a precipitate was thrown down. This you did not examine: it contained the iron.

H. O. O.—The flame-coloration of the powder was too red for sodium. The fumes evolved on heating the powder in a bulb-tube smelt strongly of ammonia, so that more than a trace must have been present. See remarks to "Scipio."

GAMEOPHYTE.—See remarks to "H. O. O."

NIL DESPERANDUM.—The yellowish colour of the hydrochloric solution of the powder, and its darkening when warmed after the addition of nitric acid, pointed to more than a trace of iron. The precipitate you obtained on adding ammonia disappeared on warming, according to your observation: it is impossible, therefore, that ammonia was present in excess. You must take great care to use your reagents in sufficient quantity. Ammonia is useless as a group-reagent unless the liquid, after ammonia has been added and thoroughly shaken up, smells strongly of the reagent. Do not be deceived by the smell of a drop of ammonia on the side of the test-tube: invert the tube to prevent any mistake of the kind.

OZONE.—A mixture of salts containing the substances you detected would have dissolved completely in water, but you observed that the powder was not all soluble in water.



The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Coroners Should Hear Both Sides before Judging.

On Saturday last, at Wandsworth, Mr. Braxton Hicks, the Mid-Surrey Coroner, resumed and concluded his inquiry with reference to the death of William Chick, who, as reported last week, died from the effects of belladonna poisoning. At the previous hearing the widow stated that her husband had been suffering from gout in his feet, in consequence of which he went to Mr. Dee, chemist, 274 Earlsfield Road, who prescribed some liniment and a bottle of medicine for him. The deceased, it was shown, had taken some of the liniment in mistake for the mixture. The Coroner, on that occasion, made some strong comments on the chemist for prescribing, and adjourned the case for the attendance of Mr. Dee.

Mr. H. R. Jones, solicitor, now appeared to watch the proceedings on his behalf. Mrs. Chick was recalled, and in answer to the Coroner said she wished to make a material alteration in her evidence. When she was previously examined she was greatly worried and confused. It was not a fact that Mr. Dee prescribed for her husband; she herself took a doctor's prescription to him and asked him to make it up, which he did. The deceased had had belladonna before, and was well aware of its properties. He got the prescription from a doctor in the country. Mr. Arthur Henry Dee, chemist and druggist, deposed that on the evening of

September 2, Mrs. Chick brought him the prescription produced and asked him to make it up. It ordered pot. bicarb., 3*ij*; pot. iodid., 3*ij*; vin. colch., 3*iv*; tinct. bellad., 3*ij*; ether. chlor., 3*iv*; aquae ad 5*vij*. A tablespoonful every three hours. He had made it up previously. Mrs. Chick asked him whether belladonna was good for outward application. He replied, "Sometimes," at the same time telling her that it was a dangerous poison. He supplied her with some belladonna liniment in a 3*oz*

By the Coroner: He was aware that the prescription was a very drastic one, but suitable for gout.

The Coroner said the widow's altered evidence had put a very different complexion on the case, for it was now perfectly clear that Mr. Dee had acted strictly within the letter of the law. Chemists had no right to prescribe, and he was very glad to find that Mr. Dee had not done so. The jury returned a verdict of death by misadventure, and added that Mr. Dee was entirely free from blame.

Is Pyrogallic Acid a Poison?

The Coroner for East Sussex (Mr. G. E. Hillman) held an inquest on September 10 regarding the death of Mrs. Violet Browning (24), the wife of Mr. William Charles Browning, stated to be a medical man not in practice, residing at Nutley. From the husband's evidence it appeared that deceased took in mistake for a medicine a draught of pyrogallic-acid solution, which he had placed on the sideboard along with other chemicals. This was on Friday, September 4. She made a remark to her husband that the medicine was nasty, but no more was thought of the matter until she began a few hours after to feel sick. He could not account for the sickness, but Mrs. Browning suggested that she had taken the wrong medicine. She was treated accordingly. Mr. R. S. White, M.B., and Mr. H. M. Langdale, M.R.C.S., were called in, but she died on Tuesday, September 9. Mr. Browning explained to the jury that deceased must have taken 1½ *ozozoz*

Through not Following the Instructions.

An inquest was held at Snargate (Kent), on September 12, relative to the death of a 6 months old infant named Button. The mother stated that she had given the child Ridge's food. Dr. Bevan, of Lydd, stated that owing to the child's puny appearance he was unable, from a superficial examination, to account for its death. From what the mother told him, he came to the conclusion that the food was unsuitable for sustaining a delicate child through a day's exposure in a hop-garden, and its death was indirectly due to both these causes. Witness found that it had been brought up on Ridge's food mixed with water only, which was wholly insufficient for sustenance without milk. According to the instructions on the tins in which the food was sold, milk

should be mixed with it in certain proportions. The jury returned a verdict of death from want of sufficient nourishing food and from exposure in the hop-garden.

Drinking Condy's Fluid.

A child named Winifred Agnes Bonner, aged 6 years, residing with its parents at Calverley Parade, Tunbridge Wells, died on Thursday in last week from the effects of drinking Condy's fluid. The child got out of bed and drank a quantity of the fluid, and although every means was used to prevent fatal effects the child succumbed. At the inquest on Friday, Dr. Elliott, in reply to the Coroner (Mr. T. Boss), stated that the child had peritonitis so acute that she would doubtless have died from that complaint, but death was accelerated, no doubt, by the fluid she drank. Dr. Elliott added it was understood that the fluid was non-poisonous, but to drink a large quantity would have a bad effect on the system, especially on one already diseased, as was the little girl. Peritonitis was the cause of death, which the fluid had accelerated. Generally speaking, the fluid was not poisonous. A verdict of death from peritonitis was returned by the jury, who thought it should go forth that it was not wise to leave disinfecting-fluids about rooms where children could get access to them.

Medicines from the Nearest Chemist.

At a meeting of the Forehoe Guardians, on September 12, tenders were received from Mr. R. Alpe and Mr. Maynard, chemists and druggists, of Wymondham, and Mr. Watts, chemist and druggist, of Hingham, for drugs, &c., required. Mr. Smith said the tenders from Wymondham were in the same handwriting and the prices identical, and this made it look as though there had been some collusion. The Clerk said there was no collusion. The handwriting was the same because the lists were prepared in his office prior to being sent to the chemists for prices. (Laughter.) Mr. Smith said the Hingham prices were much less than the Wymondham prices, and he moved the acceptance of Mr. Watts's tender. Mr. Lyons said it was too far for the paupers to go, and he moved that the articles required be purchased as hitherto at establishments near to the paupers' home. After a discussion this was carried.

The Earl's Niece and the Cat-doctor.

Miss Ursula Cockburn Dickinson is the granddaughter of the first Lord Londesborough, and until recently lived in the house of her father, the Rev. George Cockburn Dickinson, at Worcester Park, Surrey. She is 27, has money of her own, and large expectations. She is also fond of cats "wi' a lang pedigree," and, as often happens with things of gentle birth, these cats required medical treatment occasionally. The cat-doctor whom Miss Dickinson called in was a Mr. Reuben Schofield, who was in business as a chemist at Horley, Surrey. In THE CHEMIST AND DRUGGIST of August 3, 1895, there are particulars of a deed of arrangement made by Samuel Renben Schofield, trading as S. R. Schofield & Co., chemists, Station Road, Horley; but that is an incident unconnected with this story. Schofield's treatment of the cats appears to have been successful. Miss Dickinson got on visiting terms with Mrs. Schofield, and, by-and-by, when she resolved to become a partner with Schofield in a cat and dog hospital which he was to open at Tooting, Mrs. Schofield's sister went to live with Miss Dickinson in apartments at York Street, Portman Square. From there they afterwards went to reside in Lower Tooting, and when in July last Schofield had "Grasmere," Garratt Line, Lower Tooting, properly furnished, and his wife and family (two children) installed there on July 11, Miss Dickinson, her companion, and her cats also came along. Two days later Miss Dickinson went down to Brighton to see if she could find her father, and she telegraphed to "Schofield, Esq." that she liked Emery's private hotel very well, and wanted the green blouse if it turned up. Next day Schofield telegraphed to his wife that he would not be home that night—in fact, she has not seen him since, and he has written her letters to say that he has "gone off with Ursula" to start a hotel in South Wales, that he will provide for her and the dear children, and if she wants evidence for divorce proceedings he will send her particulars. This is, in brief, the story told by Mrs. Schofield to the *Daily Mail*. Mis-

Dickinson has not been heard from, and her father says that she took all her money out of the bank, and realised her securities, altogether about £22,000. Schofield, who, by the way, is aged 30, sent his wife a blank cheque, and promised to send her more money in bank-notes. The cheque when presented at the bank was found to be worth £1 only, and no notes have come. The *Daily Mail* explains that Mrs. Schofield and her sister are now at "Grasmere," living upon Miss Dickinson's cats, so to speak; for Mrs. Schofield has determined to sell them, and has disposed of one for £1 to a lady, who has not yet paid, because Mrs. Schofield has not been able to send the pedigree. The cats are orange Persians, and are valuable; but two ladies cannot live long on four cats. Miss Dickinson's father would like to know where she is.

Wine-licences.

In addition to those already mentioned in our last three issues, off-licences for the sale of wine have been granted to

Mr. C. E. Wilkinson, chemist, Hemel Hempstead.

Mr. Chas. Todd, manager of Taylor's Drug-stores, Highgate, Kendal.

Mr. Fredk. Percy Watson, chemist and druggist, 6 and 7 The Bail, Lincoln.

Mr. Geo. Arthur Grierson (Messrs. Coverdale & Grierson, chemists and druggists), 312 High Street, Lincoln.

Mr. Joseph Alfred Haynes, chemist, Station Road, Parkstone, Poole.

Mr. Charles Henry Griffiths, chemist, 394 Ashton Old Road, Manchester.

Pharmaceutical Education in Sheffield.

Arrangements have been made by the Sheffield Pharmaceutical Society for carrying on their School of Pharmacy next session. The lecturers will be: Mr. J. H. Highfield, chemist, theoretical and practical; Mr. J. Austin, materia medica and botany; Mr. E. C. Exell, assistant demonstrator; Mr. S. T. Rhoden, hon. school secretary. The annual general meeting of the Society will be held on September 23, when officers for next year will be appointed; and the inaugural meeting of the school and the dinner are fixed for October 8.

An Omission Corrected.

On Tuesday the *Daily Graphic* printed a list of the classes of persons who are exempted from jury-service, and pharmaceutical chemists did not occur in it. Mr. Richard Bremridge, Secretary and Registrar of the Pharmaceutical Society, promptly informed our contemporary that "pharmaceutical chemists actually in practice are, by the provisions of the Juries Act, 1862, freed and exempted from serving on any juries or inquests whatsoever."

The Druggist the Man for Arrowroot.

Dr. Hunter, Chairman of the Dispensing Committee of the Holborn Board of Guardians, expressed the opinion, at a meeting of the Contract Committee on Tuesday, that arrowroot should be obtained from the druggist, and not from the grocer. It was an important element in the diet of the sick, and should be got in as pure a condition as it was possible to be obtained. The quotations in the grocery tenders for the supply of "genuine Natal arrowroot" varied between 1*1/2*d. and 3d. per lb., which he contended were prices at which a first-rate article could not be obtained. The Chairman said the matter would be attended to when the drug-contracts were considered.

Theft of Two Thousand False Teeth.

The boy who, as reported last week, stole 2,000 artificial teeth from his master was sentenced at the Bristol Police-Comit on Saturday last to two months' imprisonment with hard labour, and the Magistrates expressed their opinion that Mr. Earl, who bought the metal from the boy, ought to be prosecuted for the part he had taken in the matter.

Theft from a Chemist.

At the Lambeth Police Court on Saturday, a servant-girl named Hatton was charged before Mr. Lane, Q.C., with

having stolen a diamond ring and several other articles, to the value of 2*l.*, the property of her employer, Mr. Stevens, chemist, Clapham Park Road. It appeared that the prisoner left her place in June, and the property was afterwards missed. When taxed with the theft she denied her guilt, but the articles were afterwards found in her box. Mr. Lane remanded the prisoner for further inquiries.

Alcoholic Temperance Beers.

A grocer was prosecuted at Preston last week by the Board of Inland Revenue for having sold a horehound-beer which one of the Government analysts had found to contain 4.6 per cent of proof spirit. Mr. Rossiter, the local Superintendent of Inland Revenue, who prosecuted, said that during the last few years a large trade had sprung up in these drinks. To show the extent of the trade carried on in Preston he mentioned that there were at least 500 small dealers and twenty manufacturers of so-called temperance drinks, which they sold as herb-beer, horehound-beer, and under various other denominations. These decoctions contained the same elements as beer—viz., sugar, hops, and yeast. Of course, the responsible persons were the manufacturers, but there was a difficulty in getting at them, for they cleared out the beer to retailers before fermentation set in and alcohol was present. Samples had been taken, and in more than fifty instances the stuff found in the possession of these small shopkeepers was simply beer. In consequence, warnings had been given to manufacturers and sellers that all such cases would in future be brought before the Court, and the present prosecution had been undertaken as a deterrent. This sample contained 4.6 per cent. of alcohol, or more than twice the limit allowed by the Government. It was called horehound-beer, and they found that the more alcohol there was in it the more the temperance people liked it, and the better it sold (Laughter.) Defendant was a poor woman, who was ill, and they did not wish to press the case. They therefore did not ask for any penalty, the smallest being 10*s.* and costs, but would be content to let makers of the stuff in Preston and those who sold it know that if they continued to carry on the trade they would be prosecuted. The leakage to the Revenue was half a million sterling annually, or more, because duty was not charged, and the trade was increasing. Makers used sugar to the amount of a pound per gallon, and sugar cost only 2*d.* or 3*d.* The drink was retailed at $\frac{1}{2}d.$ or 1*d.* a bottle, and three or four bottles would send a man into a fairly intoxicated condition. (Laughter.) A fine of 5*s.* including costs was imposed, but the Bench said the full penalty would be imposed in future.

Pharmaceutical Society of Ireland—October Examinations.

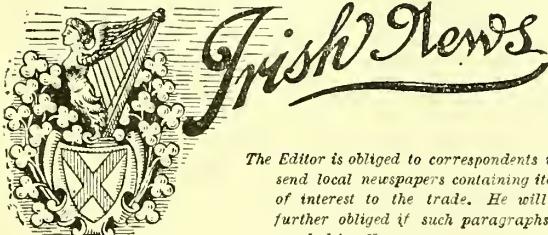
The last days for lodging applications will be as follows:—Monday, September 21, for the Preliminary examination on October 5. Monday, September 28, for the Pharmaceutical Assistants' examination on October 12. Tuesday, September 29, for the Registered Druggist examination on October 13. Wednesday, September 30, for the Pharmaceutical Licence examination on October 14 and following days.



The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Glasgow Chamber of Commerce and Greened Peas.

The Directors of the Glasgow Chamber of Commerce, at their meeting on September 14, had again before them the question of the importation of greened peas. At the previous meeting the Chamber, in response to a communication from the London Chamber of Commerce asking their support in putting an end to harassing prosecutions of retail traders for selling greened peas and other vegetables imported from abroad, instructed the Secretary to write that the Glasgow Chamber deprecated the importation of vegetables, or other articles of food, with poisonous admixtures into this country, and suggested that supervision should be extended, so that the importer as well as the retail dealer should be liable to prosecution for the sale of articles containing such admixtures. At Monday's meeting the Chairman explained that the London Chamber of Commerce and other Chambers had asked the Glasgow Chamber to reconsider the question. The result was a voluminous correspondence, in which he saw nothing that made him personally think that the Chamber should go back upon its resolution. This view was generally taken, and the Chamber declined to support the London Chamber.



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Arrived at Years of Discretion.

Thursday, September 10, completed the twenty-first year of the existence of the Pharmaceutical Society of Ireland.

An Inaugural Lecture,

on Thursday, October 1, to celebrate the reopening of the schools of the Pharmaceutical Society of Ireland, is to be delivered by Professor Tichborne on "The New Photography." A Dublin correspondent thinks "it is exceedingly reasonable to expect a very interesting lecture."

The Feast of Reason,

on October 1, will not be the only attraction to those who take an interest in their *Alma Mater*, as the Society's house will be found greatly improved in appearance, with still greater facilities than heretofore for carrying on the work of the Society.

French News.

(From our Paris Correspondent.)

CORROSIVE SUBLIMATE FOR ANTIPIRIN.—A young Paris student, M. Révé Désert, met with his death from poisoning a few days ago, while staying on a holiday with some relations at Auxerre. He took what was thought to be a dose of antipyrin, but it turned out to be corrosive sublimate.

THE TORNADO on September 10 which caused such terrific havoc in Paris was the subject of some observations and discussion at the Academy of Sciences here on Monday. M. Mascart gave the personal experiences of a gentleman who watched the progress of the cyclone from one side of the Pont Royal, where the atmosphere was so calm that he could keep his umbrella up, while the other side of the river was being devastated. No pharmacy seems to have suffered injury.

ACETYLENE GAS—A terrible explosion, due to acetylene gas, occurred last Saturday evening in a *café* at Lyons. The proprietor had recently had the new gas installed on his premises, and it is supposed that the material was in some way defective. The whole of the ground floor was destroyed, leaving only the four walls standing, while the owner of the *café*, his wife, and a customer were seriously injured. The shops on the opposite side of the street had their fronts blown in. After having had their injuries dressed in a

neighbouring pharmacy, the victims of the accident were conveyed to a hospital. This accident emphasises the warning regarding the danger of acetylene which M. Gréhaut gave at the Paris Academy of Sciences last April, and to which Professor Clowes also drew the attention of the Chemical Society nearly a year ago.

CHEMISTS PRACTISING DENTISTRY in France, if not subjected to such vexatious lawsuits as their colleagues in England just now, are at least watched with a jealous eye by one or another of the Dental Societies here since the Law of 1892 affecting dentistry came into force. The Syndicate of Surgeon-Dentists brought an action a short time ago at Montbéliard against a pharmacist who had used chloride of ethylene as a local anaesthetic without a doctor being present. The defendant was condemned to pay a fine of 16f. (13s.), and 1f. damages was allowed the prosecuting Syndicate; but the latter had to pay the costs of the case, while payment of the nominal fine was remitted for a period of five years. The judgment contained the following clause:—"Although chloride of ethylene applied in the manner stated produces only a local effect, and, as it does not introduce any poisonous substance into the system, is generally inoffensive, yet the terms of the law affecting dentistry clearly prohibit its use by dentists who have no diploma."

THE SALE OF MINERAL WATERS was the subject of a discussion at a recent meeting of the General Association of French Pharmacists. M. Collard asked if the Council could not prosecute persons, other than pharmacists, who sold mineral waters, adding that after having studied the question he thought such prosecutions could be successfully carried out. Other members expressed different views, although it was stated that as the Academy of Medicine and the Consulting Committee of Hygiene have expressed the opinion that certain mineral waters are purely medicinal and should only be sold by pharmacists, the Government might ultimately issue a decree in support of their sale by the latter, but nothing to that effect is likely to be included in the proposed new pharmacy law. At the same meeting M. Crinon mentioned that he had been consulted as to whether a medicinal mineral water sold under the name of "Purgative Vichy Water" should be regarded as a pharmacist's monopoly. In his mind, he said, there was no doubt on the subject. Being an artificial water, he thought it should be regarded as a medicine.

Foreign and Colonial News.

A GOOD ARRANGEMENT.—The New York College of Pharmacy authorities are thinking of arranging with some medical college to have students write prescriptions occasionally and to have these sent to the College of Pharmacy to be dispensed by students. The professor will examine the work, and, if properly done, it is proposed to sell the medicine so compounded to some dispensary for actual use in treating the sick.

ALKALI-MANUFACTURE IN U.S.A.—The United Alkali Company, of England, has bought 300 acres of land on the river Rouge, near Detroit, and will, it is rumoured, spend 1,000,000/- on alkali-plant there. The first drill-house has already been erected. On a ride out of Detroit into the Rouge country one can discover many salt and soda-ash plants in full operation. Scores of new houses for the working men have been put up this summer, and many others are in process of building.

PROFITS OF THE U.S.P.—Speaking on the Research Committee's report at the American Pharmaceutical Association meeting in Montreal, Mr. Ebert said that the issue of the Pharmacopoeia of 1890, from a financial point, had been very successful. The revenue had been over \$20,000. About \$10,000 is given to the persons who have done the work of the last revision, and \$10,000 will be left to expend for the next revision of the Pharmacopoeia. He advocated that some of this money should be appropriated for the work which the Association is now doing in research, especially because that work is to have a direct influence upon the next revision of the Pharmacopoeia.

A SUIT FOR \$200,000 DAMAGES has been instituted by the A. J. White Company (Limited), of London, England, against

Frederick B. McNeal, Amos Dye, Dr. R. G. Eccles, John A. Sterrett, Gustavus G. Luebbing, Charles T. P. Fennel, J. C. Culbertson, Albert B. Scott, and Samuel W. Bowne, the two last being partners of the firm Scott & Bowne. This is a new suit by White. The former suit against Scott & Bowne was for libel for causing to be published in the *Druggist's Circular* an article by Dr. Eccles which stated that White's predigested food, Paskola, was glucose. The present suit is directed against the Ohio Food Commission, and Scott & Bowne are made parties to it because Mr. White alleges that they instigated the commissioners to prosecute for selling the article.

AMERICAN TRADE-MARKS.—The English Diastasic Malt Extract Company (Limited), Mistley, have registered at Washington the word "Edme" as a trade-mark for malt-extracts; and Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen, Germany, the word "Alapurin" for wool-fat and products of same, and "Lanain" for pharmaceutical and cosmetical products. "Janos" and "Hunyadi Janos" have been registered by Emily Saxlehner, Buda Pesth, for salts of natural aperient waters and medicinal preparations containing such salts. "Sphygmogenin," as a trade-mark for pharmaceutical compounds for increasing the pressure of the blood, by Chemische Fabrik von Heyden Gesellschaft mit Beschränkter Haftung, Radebeul, Germany. Messrs. J. & J. Colman, of London, have also registered their various devices for mustard.

THE ARSENIC INDUSTRY IN ITALY.—The works at Bovisa (Milan, Italy), belonging to the Societa Anonima Ingeniere L. Vogel, are among the largest of their kind in Europe. The principal object of the company is the production of mineral superphosphate. The phosphates, amounting to about 75,000 tons yearly, are mostly imported from South Carolina, and about the same quantity of sulphuric acid is produced for converting them into superphosphates. The iron pyrites used for the production of sulphuric acid average about 25 tons per day. It is all produced in Italy. The richest pyrites contain from 10 to 12 per cent. of arsenic, which is recovered by a single sublimation from the arsenious acid precipitated in the process of roasting the ore. The Bovisa factory is the first arsenic-producing works in Italy. Before it started the arsenious acid used in that country was shipped from England, but in a year's time the Bovisa factory completely cut out the English product from the market and supplied all the demands of Italy, amounting to about 400 tons a year. The greater part of this product is used in glass-manufactures and in tanning leather. The Bovisa product is sold in Italy at 38f. per 100 kg.

INDIAN PASTEUR INSTITUTE.—We reported some time ago that a sum of 70,000/- had been subscribed in India for the purpose of founding an institute to carry out Pasteur's hydrophobia treatment. The central committee has recently decided to make the scheme more ambitious by including in it: (1) the practical application of bacteriological methods to the prevention and cure of disease, such as rabies, cholera, diphtheria, and tetanus anthrax, and the preparation of the specific antitoxins for these diseases, as well as tuberculin and mallein; (2) the investigation of tropical diseases especially prevalent in India amongst animals (including man) and vegetables; and (3) the provision of a centre, which would afford to medical officers already trained in bacteriological technique the means for the prosecution of independent research, and for the acquisition of advanced knowledge of bacteriological methods of dealing with disease, under the guidance of the officers of the institute. Where the institute is to be is not yet known. The Indian Government have offered Kasauli, but the organisers want Darjeeling, and they also need a lot more money to carry out the rather ambitious scheme which they have formulated. Dr. Haffkine, the cholera antitoxin specialist, is a moving spirit in the affair.

BRITISH TRADE WITH RUSSIA.—"There are," says our Consul at Odessa, Russia, "a great many articles of British manufacture sold in the shops in this and every other small Russian town, such as scents, soap, pickles, &c., which these shops obtain from wholesale importers in the large towns, a great obstacle to direct trade being that few commercial people here understand English, and English firms are not able to address them in their own language. German firms

generally have a clerk able to correspond in Russian, besides frequently having German agents of their own in Russia from whom their goods can be obtained, and issue circulars, price-lists, &c., in Russian, quoting prices, dimensions, &c., in Russian money and measures, which are understood by the buyers, and also stating at what price such article can be obtained from their agents in Russia should the buyer not be prepared to take a sufficient quantity or find it worth while to import direct. The price at which all British goods are sold is unnecessarily high, as they are sold through a Russian middleman, who always expects to make from 30 to 40 per cent. For instance, a bottle of scent which costs 1s. 8d. in London costs 5s. 3d. here, a difference for which the high duty and cost of importing do not account. The best way would be for the manufacturers themselves to establish large central depots, from which the small dealers could obtain articles wholesale at as low a price as possible. Were the British manufacturer to study the convenience of his buyers more, the sale of British goods would be enormously increased in Russia, where they are highly appreciated when they can be obtained on the spot at a moderate price."

TROUBLE ABOUT AMMONOL.—The inventor of ammonol is Dr. Cyrus Edson, who at one time was President of the New York City Board of Pharmacy. He is now a physician with a *penchant* for inventing chemical specifics, amongst the latest of which are ammonol and aseptolin. The first of these he sold to the Ammonol Chemical Company, which was a co-partnership of himself, Dr. A. H. Still, and Mr. F. W. Stemmler. The contracts made were to the effect that Mr. Stemmler was to furnish capital and push the sales, Dr. Still was to boom it among physicians, and Dr. Edson was to furnish the formula and also use his influence to have the preparation adopted by the profession. Mr. Stemmler got 60 per cent., Dr. Still 20 per cent., and Dr. Edson 20 per cent. of the stock. A later contract was made between Dr. Edson and the company, because through motives of professional delicacy, Dr. Edson did not care to hold stock or figure openly in the scheme, so he agreed to surrender his 20 per cent. of stock for a one-tenth interest in the dividends of the company. Dr. Edson has now brought an action against his partners because he has got no dividend, the profits having been paid in salaries of \$3,000 and \$2,000 to Mr. Stemmler and Dr. Still, nothing going to Dr. Edson. When the case came before Judge Pryor, in the New York Supreme Court, the defendants explained through their attorney that up to January 1, 1896, the company had done a business of \$15,000, with expenses of \$14,900; that Mr. Stemmler had advanced \$1,270 out of his own pocket, and no salaries had been drawn. From January 1 to August 1 of this year, the business amounted to \$14,000, with expenses of \$13,943, and while Mr. Stemmler had drawn cheques for \$1,300 for salary, he had never passed the cheques. Dr. Edson's counsel replied to these allegations in such a way that Mr. Stemmler's counsel responded with averments regarding Dr. Edson's conduct as Commissioner of the Board of Health, which went to show that he had used his position for his own benefit. Amongst the proofs advanced of these statements was the following letter:—

March 30, 1893.

Publisher of *Doctor of Hygiene*, 36 East Fourteenth Street, City.

DEAR SIR,—We will accept your proposition for an article by Dr. Cyrus Edson upon baking-powders, their usefulness in bread-making, and the superiority, purity, wholesomeness and strength of the Royal over others, &c., such article to be written in a manner satisfactory to us, and printed in the above publication; we to pay you \$500 for the whole matter. We will send data to Dr. Edson to-day.

Very respectfully,

ROYAL BAKING POWDER CO., M. L.

To this were added several letters from Dr. Edson, complaining that he did not get the whole of the money agreed upon. Dr. Edson did not "deem himself legally bound to rebut the insinuations and accusations made" in these allegations, and the outcome of the whole matter is that Judge Pryor refused to grant Dr. Edson the temporary injunction which he asked for.

A FULL-BLOODED Japanese gentleman called Joseph Barron, a "professor of pharmacy," has been arrested in an assault case at Baltimore.

Australasian News.

QUEENSLAND GUMS AND RESINS.—The *Botany Bulletin* No. XIII., issued by the Queensland Government Botanist, contains a contribution by Dr. J. Lanterer entitled "Gums and Resin Exuded by Queensland Plants Chemically and Technologically Described." This portion of the publication comprises forty-two pages of reading matter containing a detailed description and analysis of a great number of the indigenous gums and resins. The *Bulletin* can be obtained from the Under-Secretary for Agriculture, Brisbane.

NEW GUINEA SPONGES.—In the annual report of British New Guinea, the Administrator states that during a visit to Samarai, in the north-eastern part of the possession, in 1895, he granted a lease of the lagoons of the Conflict group of islets and the islets themselves to a Mr. Wickham, on condition that he should establish and carry on in the lagoons the business of sponge-growing. Mr. Wickham declares that several specimens of the wild sponge he had seen would, if properly gathered and prepared, find a ready market in Europe. There is a good deal of wild sponge in the north-eastern waters of British New Guinea, and there seems to be a prospect of establishing a sponge-gathering and sponge-cultivating industry. It is believed that by cultivation the quality of the sponge will be improved. The Conflict Islands are a small group, and uninhabited.

PHARMACY IN QUEENSLAND.—The July meeting of the Council of the Queensland Pharmaceutical Society was one of considerable importance. In the first place, a letter was read from a number of pharmacists thanking the Council for its successful efforts to secure a considerable reduction in the railway charges on the carriage of chemists' bottles. Next, the circular letter addressed by the Council to the medical practitioners of the colony asking them to initial unusual doses of potent remedies in prescriptions was touched upon. That letter appears to have been received by medical men generally in a much pleasanter spirit than could have been expected, and several letters in reply were read indicating approval of the suggestion. Next came another circular letter which had been sent to all the other Pharmaceutical Societies of Australasia, as well as to those of Ontario, Quebec, British Columbia, and Manitoba, and to the Pharmacy Board of the Cape of Good Hope, on the subject of pharmaceutical reciprocity throughout the Empire. The Queensland Council point out the desirability of united action among all the colonies in bringing before the Pharmaceutical Society of Great Britain the necessity of establishing some form of reciprocity between the British and the colonial registering bodies. The letter mentions that chemists holding British qualifications are admitted into practically all the British possessions, but that the law in Great Britain does not allow the recognition of any colonial qualification, however good. It is admitted that all colonial certificates are not of equal value, and that some may not at present be worthy of recognition side by side with the British qualifications; but it is suggested that at least an inquiry into the standard of the examinations should be made, and a basis of reciprocity established. Our colonial journal thinks that "if the bodies addressed respond with anything like unanimity it will be impossible, in the present state of public feeling in Great Britain, for the British Society to treat the matter with indifference. Indeed, it might even afford that Society an opportunity of appealing to Parliament for fresh legislation." A new "draft constitution" and new rules were also adopted. These are to be submitted to the annual meeting for acceptance. They do not differ in essential particulars from the regulations at present in force.

WHEN THE FLEET ARE TIRED a warm bath with an ounce or so of sea-salt is restful and refreshing. Paddle in the water until it cools, dry the feet with a rough towel, put on clean stockings, and change the shoes, and weariness and aching will quickly vanish. The speediest way of getting relief from fatigue is to plunge the feet in ice-cold water, and keep them immersed until a sensation of warmth is felt.—*Practitioner*.

The International Pharmaceutical Exhibition at Prague.

WE pointed out last week that the number of British firms exhibiting goods at Prague was out of proportion small. The official catalogue only contains the name of three houses in this country—viz., Messrs. John Holroyd & Co., of Manchester, who sent specimens of machines for making compressed tablets; Mr. Edward L. Henry, of Lampet Vale, Lewisham, who called attention to his “mnemonic aids in pharmacy for the use of medical and pharmaceutical students”; and Mr. William Martindale, who sent copies of each edition of his “Extra Pharmacopœia.” Vaseline and creolin were shown by the continental agents for those preparations, while the German branch of the firm of Werner & Pfleiderer exhibited mixing and kneading machines.

In Germany and Austria the legal restriction of the functions of the “apothecary,” or pharmacist, and the druggist respectively, confines the practice of pharmacy to its traditional legitimate resources, impressing upon the “apoteker” the stamp of an official sanitary institution, instead of allowing it a commercial compass limited only by the enterprise of those engaged in it. All pharmaceutical exhibitions in continental Europe have hitherto been in conformity with this principle, and have mostly or entirely represented objects belonging to the conventional legitimate practice of the apothecary, excluding all side-issues largely cultivated in pharmacy and the drug-trade in English-speaking countries. However comprehensive, interesting, and instructive continental pharmaceutical exhibitions may have been, they have never aimed at, nor offered, that extensive and manifold variety and mass of all kinds of goods and products and of commercial commodities and accessories relating to the practice, or embraced in the trade, of the enterprising pharmacist and druggist, which are offered for sale or are dispensed in English and the colonial drug-stores.

In this respect the “International Pharmaceutical Exhibition” at Prague showed a manifest change and a closer approach to British and American prototypes. Among other kindred articles it included, for instance, foods, fancy goods, toilet-goods, soaps, perfumes, cosmetics, wines, liqueurs, culinary spices, essences, &c.

Whilst, on the one hand, the exhibition represented a much wider scope in the direction of the trade-issues of modern pharmacy, it excelled, on the other, in its comparatively great wealth in literary and historical objects and documents illustrating the development of pharmacy from mediæval times to the present day. In this respect the exhibition at Prague offered a rare and most interesting and instructive array of resources for historical study. Most pharmaceutical corporations of the Austrian empire, state and municipal museums and libraries, the vaults of monasteries, convents, and castles favoured the exhibition with literary, documentary, or art treasures of which the existence was partly unknown to the present generation. In evidence of this, one of the most interesting displays of the exhibition, there may be enumerated from among the exhibitors the following who have rarely contributed to any of the former pharmaceutical shows:—The Archives and the National Museum of the Metropolis of Bohemia, the Prince-Archbishop of Bohemia, the Monastery of the Benedictines at St. Margaret, the Monastery of the Premonstratense Brotherhood at Prague, the Convent of the Benedictines at Lettowitz, the Convent of the Brothers of Mercy at Prague, the Libraries of the Prince of Schwarzenberg at Wittingau, the Museum of Prague, Prince Charles Lobkowitz, the Prince-Archbishop Kohn, Count Karl von Bourgay, &c.

This historical and literary part of the exhibition included, besides old Pharmacopœias and Dispensaries, old documents, records, diplomas and medals, pharmaceutical appliances, utensils, outfit of old prescription-pharmacies and of pharmaceutical workshops of mediæval times, as represented in Dr. Peter's well-known book, the “Pictorial History of Pharmacy.”

Another excellent feature of the exhibition, as yet little known in pharmaceutical exhibitions, was the comparatively extensive and complete representation of the department of hygiene and the care of the sick in hospital, as well as in ac-

idents and emergencies, including the vast domain of bacteriology and of the modern “serum-therapy.” In this respect the exhibition was a revelation to pharmacists, opening a vista over the yet undefined sphere of the future realms of medicine and medication. The scope and character of this very prominent part of the exhibition will be indicated by the subsequent enumeration of the groups into which the exhibits have been described in the official catalogue.

A further feature of such pharmaceutical exhibitions may be mentioned as a novel and creditable one. This consisted in the creation of a botanical garden on a small scale outside the exhibition palace. By the expert skill of the botanist and the gardener, a large number of officinal plants, grouped as much as practicable in natural orders, had been planted and well cultivated during the spring and the summer months, just in front of the magnificent exhibition palace. This comprehensive array of living and partly flowering officinal plants was very representative and instructive, and well supplemented the great number of herbarium specimens and illustrated botanical works and maps exhibited inside the building, as also the splendid pharmaceutical exhibits of the museums of the “Allgemeine Oesterreichische Apotheker-Verein” and of the “Pharmaceutische Gesellschaft” of Prague.

Without entering upon any detailed enumeration or description of the exhibits, it may safely be said that the average display of the exhibition represented the general stock of goods, preparations, implements, utensils and apparatus mostly met with in pharmaceutical shows, including crude drugs, galenicals, and chemicals, and a full array of the elegant preparations of the modern manufacturing pharmacist which are familiar to every British pharmacist and druggist. In the official catalogue the objects of the exhibition were assorted into the following eight groups:—

1. Scientific apparatus applied in pharmacy and its branches.
2. Pharmaceutical and kindred literature.
3. Apparatus and machines used in pharmacy and pharmaceutical industries.
4. Outfit and utensils of pharmacies.
5. Drugs, pharmaceutical and chemical preparations.
6. Literature, documents, apparatus, and appliances illustrating the historical evolution of pharmacy.
7. Special exhibits of pharmaceutical corporations and societies.
8. Hygiene and the care of the sick.
 - a. Domestic hygiene. Public and private institutions and hospitals, water-supply, ventilation, bathing, illumination.
 - b. Personal hygiene. Clothing, nutrition, foods and drinks, cosmetics and perfumes.
 - c. First help in emergencies, hospitals, army and navy.
 - d. Instruction in hygiene, literature, school hygiene, gymnastics, bacteriological and microscopic preparations for demonstration, disinfection.
 - e. Balneo-therapy, mineral springs, watering-resorts, climatic sanitaria.

The arrangement and all displays of the exhibition were conspicuous and tasteful, and the space in the magnificent exhibition palace was ample. Therefore, the exhibition in its entirety, as well as in its divisions and groups, made a most harmonious and favourable impression. If there was any drawback worth mentioning, it was the far too general use of the Bohemian language for all inscriptions and descriptive signatures in the exhibition and on the individual exhibits—a language unintelligible to all or most visitors from outside Bohemia.

Another remark may, in concluding, be in place and justified. The too readily applied term “international” has proved to be a misnomer for everything pharmaceutical, particularly for exhibitions, for efforts to create an international Pharmacopœia, and last, but not least, to the so-called international pharmaceutical congresses. As yet they have hardly attained to a truly national representation, and the Prague Exhibition has been no exception to this experience; but it has, like its Vienna prototype in 1883, well succeeded in offering a comprehensive and most creditable representation of the accomplishments and of the high status of modern pharmaceutical application and industry, in particular, in the great Austrian Empire. For this realisation on a perfect

scale, under the lofty dome of the splendid exhibition palace at Prague, great credit is due to the enterprise of the Pharmaceutical Society of Prague, and its fraternal associations in Bohemia and other provinces of the Austrian Empire.

The present Austrian law regulating the exercise of pharmacy and the granting of pharmaceutical degrees dates from December 16, 1889, when it superseded the antiquated law of May 29, 1859. Under the present regulations anyone, before entering upon the study of pharmacy, must show proof that he has passed the sixth, or highest, standard of a gymnasium or a Real-Schule; if the latter, proof must also be shown that the candidate has knowledge of Latin. A gymnasium being an intermediate classical school, no such certificate is required from candidates who come from gymnasia. The candidate, thenceforward officially known as "Aspirant in Pharmacy," must pass a two or three years' course in pharmacy, including both practice and theory, at one of the Austrian Pharmaceutical Society's schools at Vienna, Prague, or Lemberg. At the end of his "Aspirant's" curriculum the candidate must pass a severe examination, after which he is allowed to continue his studies at one of the eight Austrian Universities, but the commencement of his University career must immediately follow upon the conclusion of his studies as "Aspirant." The University course is one of two years, the first year being devoted to physics, botany, chemical analysis, and inorganic and organic chemistry. The second year is devoted to theoretical and practical pharmacognosy and microscopy, pharmaceutical chemistry, and analysis. The "Candidate in Pharmacy," as he is called, has now to pass three examinations in branch subjects and a final general examination (known as the "Rigorosum") before he obtains his diploma. The three first named are in physics, botany, and chemistry; the "Rigorosum" embraces chemistry, analysis, pharmacognosy, and microscopy, both theoretical and practical. For chemistry the candidate must test a simple or compound mixture, and determine its composition by volumetric analysis; test the identity and quality of a chemical or pharmaceutical preparation, and determine an organic drug by microscopical examination. Only after he has passed the practical examinations is the candidate allowed to present himself for the "Rigorosum," or theoretical part, in which he is examined *viva voce* for fifteen minutes by each of the examiners in the presence of a Government commissary. He then receives the diploma of "Magister of Pharmacy," but he is not allowed to open a pharmacy of his own until he has served five years as assistant. This service is certified by the authorities on the back of the diploma. The former degree of Doctor in Pharmacy no longer exists, but a pharmacist who, apart from his "Magister" diploma, has gained the degree of Doctor of Philosophy is entitled to call himself "Doctor in Pharmacy."

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section, free of charge, if properly authenticated.

SIGNOR A. MOSCATELLI, formerly Director of the Pharmacy connected with the Galliera Hospital at Genoa, has opened a business at 33 Via Carlo Felice, Genoa, under the style of "Farmacia Internazionale."

MESSRS. PERCY LUND & CO (LIMITED), of Bradford, have disposed of the photographic-varnish manufacturing part of their business to Messrs. R. J. Appleton & Co., of Manningham Lane and Charles Street, Bradford.

MESSRS. BOOTS will shortly open a handsome new shop in Queen Street, St. Helier, Jersey. The adjoining shop is arranged to harmonise, and here is the business of "Rowe, cash stationers," in which, it is understood, Mr. Jesse Boot is interested by marriage relationship.

MR. H. S. PEARMUND, pharmaceutical chemist, having recently disposed of his business at Hereford to Mr. C. T. Kemp, of Bristol, has completed negotiations for the purchase of the Kent Drug-stores (Limited), carried on by Mr. Chabot at 48 High Street, Tunbridge Wells.

Trade Notes.

MESSRS. BURGOYNE, BURBIDGES & CO., Coleman Street, E.C., are the appointed agents for ammonol.

THE LIEBIG COMPANY are now supplying their Liebig Company extract in 5*l.* lots on lowest terms, and have fixed minimum re-sealing prices.

MESSRS. GOODALL, BACKHOUSE & CO., of Leeds, have opened a central office and showroom at 5 Carr's Lane, Birmingham, where they will show a full selection of samples of their manufactures. Mr. R. Pauli is in charge.

SAPONACEOUS TOOTH-PASTE.—MR. J. F. Brown, pharmaceutical chemist, Dover, sends us a sample of his 6*d.* saponaceous tooth-paste. It is an exceptionally nice article, white in colour, aromatic in flavour, and produces an agreeable froth which is thoroughly detergent. Moreover, it is a big sixpennyworth.

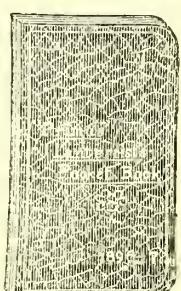
MR. FRED. REYNOLDS'S latest dream sells at 6*d.*, by post 7*d.* It is about the Chemists' Exhibition. One of the happiest touches in it is the combat between the pill and a tabloid, the pill getting the worst of it; but a gentleman (closely resembling Dr. Tanner, M.P., and also Mr. Butler—let us say Butler or Tanner) is coming along on a syphon, seemingly threatening the existence of both combatants.

MESSRS. JOHN RICHARDSON & CO., LEICESTER (LIMITED), have lately made considerable additions to their already extensive premises. They have acquired two large warehouses adjoining their present pill-factory in Pocklington's Walk, Leicester. One of these will be devoted to the manufacture of their flexible gelatine capsules, and the second will be fitted with a modern plant for the manufacture of fine chemicals.

ENGLISH ACETIC ACID.—It will be noticed, from an announcement made in this issue, that Messrs. Johnson & Hooper, Crown Works, Stratford, E., are making acetic acid by an entirely new process, which, we understand, gives an acid free from those objectionable impurities, such as sulphuric acid, which are sometimes met with in the foreign acid which has hitherto been the chief source of the English supply. The firm will supply samples and quotations to large buyers of the acid.

Now that the winter season with its trade in winter comforts is approaching, we may commend to our subscribers the "Health" chest-protectors, manufactured by the Liverpool Lint Company, Mark Street Mills, Liverpool. These are made of stockingette material, with the inner side fleecy. White, cardinal, and natural grey are the principal colours, and the protectors are elegantly and substantially made. We notice that the binding and buttons are sewn with silk thread, and the single protectors are adjusted round the neck by a silk cord which slides in an artful white-metal catch, so that it can be raised or lowered as the wearer desires. This is much better than the old-fashioned elastic cord.

THE "PRIMUS" LANTERNIST'S POCKET-BOOK for 1896-97, which is edited by Mr. W. F. Butcher, F.C.S., has just been published by Percy Lund & Co (Limited). Its appearance is opportune, for the lantern season is beginning and it promises to be better than the photographic season now closing. Mr. Butcher gives a number of useful data in the book—for example, a table for calculating the size of the disc from the focus of the lens, &c., one showing the amounts of gas in cylinders of various sizes, blanks for recording gas used, for particulars of engagements, slides owned and lent, &c.; in fact, nothing appears to have been omitted which will aid the lanternist in being methodical and obviating danger. The diary of engagements dates from September 1, 1896, to August 31, 1897. The book retails at 1*s.*, and may be obtained from Messrs. W. Butcher & Son, Blackheath, S.E.



Bankruptcies and Failures.

Re FREDERICK EDWARD JAMES, 74 Morley Street, St. Helens, Chemist's Assistant.

THIS bankrupt was examined at the Liverpool Bankruptcy Court on September 10. An order for summary administration had been made by the Court. The liabilities were returned at 100*l* 0*s*. 1*d*., and the assets at 11*l*. He stated that prior to December, 1892, he was in the employ of the L. and N.W. Railway Company at St. Helens. His liabilities were principally caused through betting. He admitted that he had taken money, not his own, for the purpose of betting, and had been punished. He borrowed a sum of 70*l*., for which three persons went surety. One of these questioned him in court, and he admitted that when he induced them to become sureties he did not make known the real purposes for which the money was borrowed—namely, betting. The examination was closed.

Re THOMAS HARTLEY, 197 Sussex Road, Southport, Chemist and Wine-dealer.

THE examination of this debtor was commenced at the Liverpool Bankruptcy Court on September 10. The bankrupt's liabilities are 1,634*l*. 2*s*. 8*d*., and his assets are estimated at 662*l*. 15*s*. 5*d*.. In answer to the deputy Official Receiver, the bankrupt stated that he commenced business in London in September 1885, having borrowed 150*l*. from an aunt. He sold the business in 1890 and removed to Nelson, near Burnley, and afterwards, having had a dispute with his landlord, he removed to Southport. At that time he owed the money originally borrowed from his aunt, and a further sum borrowed from another relative, but thought that, taking into account the value of the stock, he would be solvent. The bankrupt was questioned at some length as to his position at various times, and also as to the profits made in the business. He estimated that his profits from the drug-business had been about 2*l*. a week; but his takings had increased latterly, after adding the wine and spirit branch, and the profits then would become about 4*l*. a week net. The examination was adjourned to October 28.

Re JOHN DARCY, formerly trading as a Druggist at Clanbrassil Street, Dublin.

AT the Dublin Bankruptcy Court on September 8, before Judge Miller, this debtor (who left the country in April last and had since returned) was examined. In reply to Mr. R. P. Curton, Q.C., who appeared for the assignees, the debtor stated that when he left Dublin he took with him 125*l*. or 130*l*. 25*l*. of which he procured by a cheque, which he gave to his assistant, Mr. Jameson, by whom it was cashed at the National Bank. About 40*l*. was raised by pledging jewellery which a friend had given him for that purpose. After leaving Dublin he went to Cape Town, and there he was robbed of 120*l*. He returned to Dublin about three weeks ago.

Dr. Houston, Q.C., for the bankrupt, said it was really grief at the death of a child which had driven the bankrupt to leave the country. His solicitor stated that he had paid 17*s*. 6*d*. in the pound, and that the sum already realised, including the expenses incurred, was more than the total amount of Mr. Darcy's liabilities.

The bankrupt said when he left the country he was under the impression that his estate would pay more than 20*s*. in the pound.

The sitting was adjourned.

Re JOHN PHETEAN, 11 Deansgate, Bolton, Chemist's Assistant.

THIS debtor came up for his public examination at the Bolton Bankruptcy Court on Monday, before Mr. Registrar Holden. The statement of affairs showed a deficiency of 278*l*. 16*s*. 1*d*.. The debtor attributed his failure to pressure by a creditor. He stated that he traded as a chemist and druggist in Deansgate from 1890 to 1892. In October of the latter year he was in financial difficulties, and executed a

deed of assignment for the benefit of his creditors. He was then owing about 900*l*., and on the estate being realised some of the creditors received a dividend of 8*d*. in the pound. Debtor had since been a chemist's assistant. A family creditor who declined to join him in the arrangement of 1889 issued a writ to recover a debt of 270*l*., and as he was unable to meet it he filed his petition. He has no expectations from any source. The furniture, &c., belongs to his wife, his own goods being sold under the assignment. The examination was ordered to be closed.

Re ELIZABETH ANN REDHEAD and DOROTHY MASON, trading as H. J. Mason & Co., 58 and 60 Fowler Street, South Shields, Durham, Chemists and Druggists.

THE following are creditors in this recent failure:—

	£ s. d.
Chemists' Association (Limited), London	22 17 10
Cleaver, F. S., & Sons, London	14 7 11
Cohen, I. & M., London	11 13 6
Ismay, John, & Son, Newcastle-on-Tyne	268 0 0
Kerfoot, Thomas, & Co., Manchester	18 15 9
Raimes, Clark & Co., Edinburgh	39 15 4
Rowntree, H. J., & Co., York	16 5
Wright, Layman & Umney, London	16 2 8

Preferential Creditor for Rent.

Thompson, Matthew, South Shields.. 26 5 0

Gazette.

PARTNERSHIPS DISSOLVED.

Holmes, C. H., Sadler, J. J., and Holmes, H., under the style of Holmes, Sadler & Holmes, Manchester, manufacturers of photographic materials and glass-merchants; so far as regards J. J. Sadler.

Parsloe, H. H., and Oakeley, C. E., under the style of Parsloe & Oakeley, Ivy Dale Road and Kitto Road, Nunhead, S.E., medical practitioners.

Stopford, R., and Richards, G. P. P., under the style of Stopford & Richards, Southport, physicians and surgeons.

Wylde, F. G., and Wylde, P. R., under the style of Wylde Brothers, Station Road, Brixton, S.W., horse and cattle food manufacturers.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATION.

Blewitt, Patrick Lyons, Barking Road, E., physician and surgeon.

New Companies and Company News.

G. W. RUTTERFORD & SON (LIMITED).—Capital 15,000*l*., in 1*l*. shares. Objects: To adopt an agreement with F. W. Graham, and to carry on the business of manufacturers of and dealers in dentists' requisites.

CHAPLAIN & CO. (LIMITED).—Capital 200*l*., in 1*l*. shares. Objects: To carry on, at Gateshead-on-Tyne or elsewhere, the business of dray-salters, confectioners, grocers, and other businesses of a similar nature. Registered without articles of association.

ALCATRAZ (LIMITED).—Capital 1,000,000*l*., in 1*l*. shares (of which 200,000 are 6*d*. per cent. cumulative preference). Objects: To purchase or otherwise acquire, hold, own, sell, handle, manufacture, refine, develop, produce, and deal in oils, asphaltes, gases, bituminous substances, and mineral deposits of all kinds, and the products and derivatives thereof. The first directors (to number not fewer than three nor more than ten) are to be nominated by the subscribers. Qualification, 250*l*. Remuneration, 200*l*. each per annum.

WOODCOCK'S AMMONIA FOAM COMPANY (LIMITED).—Capital 5,000*l*., in 1*l*. shares. Objects: To purchase or otherwise acquire from James Woodcock, chemist, of Birkenhead, all his right, title, and interest in the preparation or compound known as "Woodcock's Fragrant Ammonia Foam," and to carry on the business of wholesale and retail chemists,

druggists, pharmacists, dentists, herbalists, and manufacturers of and dealers in patent and proprietary medicines, perfumes, scents, extracts, toilet requisites, &c. None of the signatories to the memorandum of association appear to be connected in any way with pharmacy. Registered without articles of association.

STANDARD CYANIDE MANUFACTURING COMPANY (LIMITED).—Capital 60,000*l.*, in 1*l.* shares. Objects: To acquire the British, foreign, and colonial rights granted to or applied for by Monsieur J. R. Moise in respect of an invention for improvements in obtaining and manufacturing cyanides and ferro-cyanides, to enter into an agreement with Thomas Morris & Co., and to carry on the business of manufacturers of and dealers in cyanides and ferro cyanides. The first directors (to number not fewer than three nor more than seven) are to be nominated by the subscribers. Qualification, 100*l.* Remuneration, as the company may decide. Registered office, Billiter House, Billiter Street, London, E.C.

DOUDNEY & CO. (LIMITED).—Capital 15,000*l.*, in 1*l.* shares (of which 5,000 are preference). Objects: To acquire and take over as a going concern the business of soap-boilers carried on at Commercial Road, Landport, Hants, as "Doudney & Co.," to enter into a certain agreement with Marian Potter and Jane E. Potter, and to carry on the business of soap and candle makers, colour, dye, and paint manufacturers, chemical-manufacturers, chemists, druggists, drysalters, &c. The first subscribers (each with one share) are:—Mrs. M. J. Potter, Yarborough Road, Southsea; Mrs. J. E. Potter, 44 Clarendon Road, Bedford; W. Monkhouse, 333 Commercial Road, Portsmouth, manager; W. Pink, knight, Shrover Hall, Cosham; W. R. D. White, 70 Elm Grove, Southsea, chemist; H. R. Pink, Hillborough Crescent, Southsea, merchant; E. H. Cooper, 14 Osborne Road, Southsea, broker. The first directors (to number not fewer than three nor more than six) are Sir Wm. Pink, W. R. D. White, Harold Pink, Edwin H. Cooper, and W. Monkhouse. Qualification, 100*l.* Remuneration, 1*l.* 1*s.* each per meeting attended. Registered office, 333 and 335 Commercial Road, Portsmouth.

SADLER & CO. (LIMITED).—The annual report of the directors of Sadler & Co., Cleveland Chemical-works, Middlesborough, shows that the profit realised for the past year amounts to 27,359*l.* 7*s.* 4*d.* The directors recommend a dividend of 4 per cent.

THE directors of Lewis & Burrows (Limited) entertained their branch managers to dinner at the Horseshoe Hotel, Tottenham Court Road, on September 15. Mr. Brough occupied the chair, supported by Messrs. W. B. Wick and J. E. Griffiths, and Mr. J. Kitching Matterson was in the vice chair. Speeches, songs, and recitations filled up the evening. Mr. J. Aubrey Thomas acted as pianist.

MARZA SYNDICATE (LIMITED).—Resolved August 6, confirmed August 27: "That it is desirable to reconstruct the company, and accordingly that the company be wound up. W. W. Macalister, 10 Coleman Street, I.A., liquidator, is hereby authorised to enter into any sale or arrangement, and in particular to enter into an agreement with the Industries Development Syndicate (Limited), when incorporated, for the sale to it of the whole of the business and assets of this company."

VICTORIA SOAP COMPANY (LIMITED), Millbay, Plymouth.—Resolved August 12, confirmed August 27: "That it is expedient to effect a transfer of the assets and liabilities of this company to the New Patent Candle Company (Limited), and that with a view thereto the company be wound up. Joseph Pillman, Thornleigh, Maunakead, Plymouth, and Henri B. S. Woodhouse, 10 Portland Square, Plymouth, liquidators, are hereby authorised to adopt the said agreement, and carry the same into effect."

GREAT TOWER STREET TEA COMPANY (LIMITED).—Resolved August 7, confirmed August 26: "That it is expedient to transfer the undertaking, property, assets, debts, and liabilities to the company styled Tower Tea (Limited), and that with a view thereto the company be wound up; that James R. Large be liquidator; and that the conditional agreement, dated July 9, and expressed to be made between James R. Large on behalf of this company and Tower Tea (Limited) be and the same is hereby approved, and that the

liquidator be and he is hereby authorised to adopt the said agreement, and carry the same into effect."

THE fourteenth annual report of the directors of Kemp & Co. (Limited), Bombay, for the year ending June 30, 1896, shows a balance of profit-and-loss account of 62,703*r.*, out of which it is proposed to pay a dividend of 12 per cent. (or 2*l.* per share) on the ordinary shares. This will absorb 42,000*r.* Of the remainder, 11,011*r.* are proposed to be carried to reserve-fund, 4,150*r.* to go in bonuses to the staff, and 5,547*r.* to be written off. The reserve-fund now amounts to 192,788*r.* The directors express their complete satisfaction with the details of the management and the efficiency of the staff.

PRICE'S PATENT CANDLE COMPANY (LIMITED).—At a meeting held on September 11, a dividend of 16*s.* per share for the half-year ending June 30 last, free of income-tax, was declared. The chairman (Mr. T. C. Wright) said the profit the company had made in the corresponding half-year of 1894 was 26,147*l.*; in that of 1895 it was 38,352*l.*; and in the past half-year it had been 38,650*l.* The dividends had been 10*s.*, 15*s.*, and 16*s.* for the respective half-years. That result had been attained mainly through economies which have been introduced in the working of the factory and the extension of the business.

Personalities.

ON Friday last the past and present students of the Newington College of Chemistry presented Mr. Frederick Davis, the principal, with a handsome marble clock, representing the Coliseum at Rome, as a wedding-present.

ONE of his fellow-chemists in the town informs us that Mr. James Calvert, chemist and druggist, of Belper, completes his fiftieth year in business on Saturday, September 19. Mr. Calvert introduced paraffin oil and Dutch yeast into Derbyshire and the adjoining counties.

BROTHER CLEMENT BAKER, P.M., has been installed as Worshipful Master of the Yarborough Lodge of Freemasons, Jersey, for another term. Mr. Baker formerly carried on business as chemist in King Street, St. Helier, but now devotes entire attention to his mineral-water manufactory.

MR. HEPPLE, chemist and druggist, Hastings, Sussex, was on Saturday last a passenger on board the pleasure-steamer *Alexandra*. Soon after the vessel started he slipped on the deck, and dislocated his shoulder and injured his leg. He had his injuries attended to at Treport, but owing to the rough weather it was Monday at noon before the vessel could land its passengers. Mr. Hepple was then conveyed to his residence in Havelock Road on an ambulance.

SIR JOSEPH LISTER, the President of the meeting of the British Association at Liverpool, is in his seventieth year, and is one of the most eminent English surgeons living. He is the inventor of the antiseptic spray and the antiseptic bandage, by the use of which many operations of a dangerous nature have been rendered safe. Li Hung Chang, the other day at Glasgow, expressed great interest in Sir Joseph, and mentioned that he owed his life to the use of the antiseptic treatment when he was injured by a Japanese assassin. Sir Joseph is a graduate of London University, and is also LL.D. of Glasgow, D.C.L. of Oxford, and LL.D. of Cambridge. Sir Joseph, who is a native of Essex, was formerly Professor of Clinical Surgery in Edinburgh University, and Professor of Surgery in Glasgow University, and is now Surgeon-Ecclesiary to Her Majesty. He was created a baronet on Mr. Gladstone's recommendation thirteen years ago.



SIR JOSEPH LISTER.

A HARD LIFE.—“Yes, I find my work very trying.” “What's your occupation?” “I am a manufacturer of lard.”

American Notions.

WE collect below a few ideas from American sources. The following suggested newspaper advertisement is contributed to the *American Druggist* by Edwin C. Barker:—

Danger!

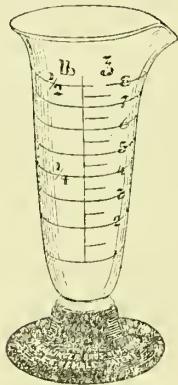
A man came into our store recently and asked for a gallon of Spirits of Nitre. The price he was willing to pay would not cover the cost of manufacture if it is made properly, and we lost the sale.

The physician or nurse who uses this preparation expects a certain result from the dose prescribed, and if it is cheapened by the addition of water or by the omission of a portion of its active principle the health, and frequently the life, of the patient are endangered. If we cannot sell full strength preparations, we will not sell any.

George T. Reed & Co.,
CANISTEO, N. Y.

TO SAVE THE MEASURES.

This is a patent graduate noticed in the *American Druggist*. It has a base of hard rubber screwing on a glass



measure, which base can be removed from one glass if that breaks and placed on another. Neidlinger Brothers, New York, are the sole manufacturers.

A PRETTY WINDOW-EFFECT

is mentioned by Mr. L. H. Foster in the *Bulletin of Pharmacy*. It was seen in the Kalish Pharmacy, New York, and puzzled and interested the passers-by for some time. In the centre of the window was balanced the little apparatus known scientifically as the pulse-glass. There was a red-coloured liquid in the glass, and at each end, just escaping the bulb, was hung an incandescent light. The current was turned on automatically in each lamp alternately, and the action of the heat upon the bulb caused the red fluid to flow into the bulb nearest the light; then the current was turned on in the other lamp, and the fluid would run back into the other bulb, thus maintaining a continual see-saw motion that made a very pretty device for catching the eye.

THIS LABEL

we reproduce from *Merch's Report*. Mr. Evans is one of the cleverest advertising chemists in the United States.

If this parcel gets lost, and the finder sends it to Evans's, 1106 Chestnut, Philadelphia, the expense will be paid, and the owner will probably get it.

He has one of these labels put on every parcel which he sends out. It is an insidious little advertisement which pleases everybody.

A TRIPLE SHOW BOTTLE.

The show-bottle, with wrought iron-stand, sketched below, is advertised by John M. Maris & Co., of Phila-



delphia and New York. The complete height is 57 inches. With plain glass it is quoted \$7; engraved, \$8 50c.; cut, \$13 50c.

Gelatine Capsules.

WE referred on September 5 to Mr. Alpers's paper on this subject. The manufacture of empty capsules in U.S.A. was dealt with, and the author read a note from Messrs. Parke, Davis & Co., the largest manufacturers, which stated that these are made as follows:—

Metal moulds set in metal plates are first lubricated and then dipped into solution of gelatine. They are withdrawn at a regulated speed, the solution being of a given temperature, and that temperature being higher according as the temperature of the moulds is lower and *vice versa*. The temperature of the moulds and of the solution, and the speed at which the moulds are withdrawn, determine the thickness of the capsule. The solution comprises 7 parts of water to 4 of the finest gelatine. After dipping, the gelatine investment is allowed to congeal sufficiently, and it is then cut by a special cutting-machine, and the waste about the cut is shoved away from the capsule. The capsules are dried by passing a current of air over them, and when dry and hard are stripped from the mould by machine. The caps are joined to the bodies by hand, and at the same time defective capsules are sorted out and rejected.

Mr. Alpers exhibited an apparatus for filling capsules with powders, of which the subjoined is a sketch:—

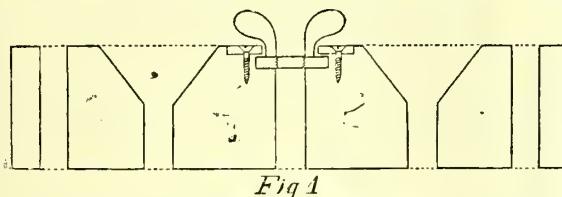


Fig. 1

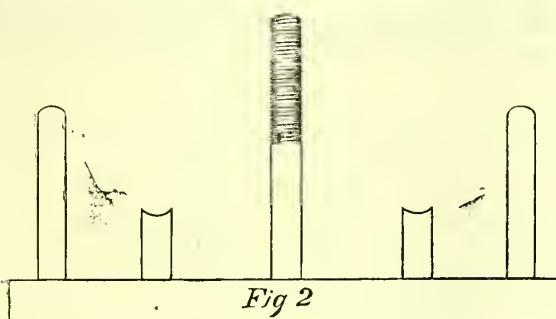


Fig. 2

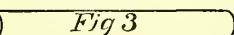


Fig. 3

It consists of a base (fig. 2) with a number of small plugs, and a block (fig. 1) with a corresponding number of holes into which the plugs fit; these holes are widened at the upper side into small funnels. At the sides are pegs as guides for the upper block, so that each hole will be exactly over each plug. In the centre of the baseboard there is a small metal rod with a thread for a screw nut at the upper end; the nut for this thread is held on the upper side of the perforated block by an overlapping flange, and can be turned easily by means of a pair of wings. A short plunger (fig. 3), concave at one end and convex at the other, completes the apparatus. In filling the capsules the two blocks are arranged so as to place the upper one over the lower one, the empty capsules are introduced and pushed by means of the plunger into the perforation until they touch the plugs; if necessary the upper block is lowered by means of the screw until the upper parts of the capsules are even with the funnel-shaped widening of the perforations; the powders, each one having been weighed, are put into the funnels and pressed down with the concave end of the plunger, leaving a small elevation over each capsule for the hollow of the cover. By a few turns of the nut the capsules are now partially raised out of their casings, high enough to put the covers on; these latter might be moistened inside with a trace of water by means of a camel's-hair pencil, and thereby glued on. After the covers are put on, a few additional turns of the screw will raise the capsules entirely out of the casings.

Scientific Notes.

Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected, and Translated.

TO DISTINGUISH LE BLANC FROM AMMONIA ALKALI.

TAKING advantage of the comparative lightness of soda made by the ammonia or Solvay process, the Missouri Commercial Laboratory gives the following rough test to distinguish the two kinds:—Pulverise in a mortar 120 grammes of the soda-ash to be investigated. Hold a graduated cylinder in one hand, in an inclined position, and by the other hand, with a card, put the soda in the cylinder until the mark is reached. Shake the cylinder very gently, and do not strike it on a hard surface, for this would make the soda solid in the cylinder. When the cylinder is filled to the mark, weigh the soda. It has been found by a large number of experiments that 100 c.c. Solvay soda weighs from 56 to, at the most, 68 grammes, and the same volume of Le Blanc soda weighs from 90 to 98 grammes.

WILD-CHERRY BARK.

PROFESSOR A. B. STEVENS, of Ann Arbor, has, on behalf of the Research Committee of the American Pharmaceutical Association, made an exhaustive examination of the wild-cherry bark of American commerce, with the view of ascertaining its quality and the source of the best supply. The method of assay consists essentially in macerating the ground bark in ten times its weight of water for twenty-four hours, then distilling, and titrating the distillate with deci-normal silver nitrate, as for hydrocyanic acid. Several modifications of the method were tried, but the above process is as good as any. The results obtained show that the bark from young trees is richer in glicoside than bark from old trees. The following are results of analysis of bark collected from different parts of the same trees:—

—	Root	Twigs	Trunk
Tree 18 inches diam. ..	0.0614	0.0651	0.214
Tree 8 inches diam. ..	0.2487	0.1640	0.1165
Tree 6 inches diam. ..	0.2223	0.1295	0.0874
Tree 6 inches diam. ..	0.1957	0.1295	0.1290

The figures represent percentages of HCN, and they also show that bark procured from different parts of the same tree varies in strength, the degree of strength being represented by the parts in the following order:—Root, twigs, and trunk.

ASSAY OF BROMO CAFFEINE PREPARATIONS.

MR. CHAS. E. ALEXANDER recommends (*Amer. Jour. Phar.*) the following method for the assay of granular effervescent potassium bromide with caffeine:—One grammie of the preparation is dissolved in about 30 c.c. of water, the solution acidified with nitric acid, warmed, and completely precipitated with silver nitrate. As the precipitate may contain silver chloride it is collected on balanced filters, washed thoroughly with hot water, and afterwards treated on the filter with a 10-per-cent. solution of ammonium carbonate, applied in small quantities and uniformly distributed, to dissolve silver chloride. The precipitate is then washed free of ammonium carbonate with cold water, and dried to constant weight at a temperature not exceeding 130° C. The weight of AgBr found gives the amount of KBr in the sample. Chlorides may be determined by treating the filtrate with nitric acid, and heating the mixture. Any precipitate obtained is collected on balanced filters, dried like the silver bromide, and weighed. To estimate the caffeine, 5 grammes of the salt is placed in a mortar and triturated with 3 c.c. of solution of ferric chloride (U.S.P.); then sufficient sodium bicarbonate is added to make a magma and impart an alkaline reaction (about 3.5 grammes). Twenty cubic centimetres of chloroform is then thoroughly rubbed through the magma with the pestle and decanted into a weighed beaker. Two other portions of chloroform, of 10 c.c. each, are then applied to the magma in succession, and likewise transferred to the same beaker. The united chloroform washings are next carefully evaporated, and the beaker kept in a water-bath until the weight is constant.

GOLD MEDALS 1884-1885-1886-1888.

"SANITAS"
DISINFECTANTS

TRADE
MARK.

"SANITAS" EUCALYPTUS PREPARATIONS.

Kingzett's Sulphur Candles and Sulphugators,

Kingzett's Drain Testers,

Preserved Peroxide of Hydrogen,

Mercuric Bactericide, Eucalyptus Oils.

L. G. B. Corrosive Sublimate Pellets; "Okol" and "Crocide" Fluids and Powders; Chloride of Zinc; Carbolic Fluids, Powders, and Soaps; Soluble Carbolated Creosote; Moth Paper; Weed Destroyer, Sheep Dips, &c.

THE SANITAS CO., LTD.

BETHNAL GREEN, LONDON, E.



"EUREKA"
WEED KILLER.

THE GARDENER'S FRIEND.

Saves Time, Labour, and Money. Safe, Effective, and Cheap.

ONLY ADDRESS:

TOMLINSON & HAYWARD,
Mint Street Chemical Works, LINCOLN.

ESTABLISHED 1842.

PATENTS, DESIGNS, & TRADE MARKS.

Searches effected through the Classified Volumes of the Society free of charge. Registrations throughout the world. Advice as to Infringements preliminary to litigation.

APPLY—

TRADE MARK PROTECTION SOCIETY,
1 FURNIVAL STREET, E.C.

TRADE MARK REGISTRATIONS
(HOME, FOREIGN, AND COLONIAL.)

Moderate Inclusive Fees.

SEARCHES, REPORTS, DESIGNS.

T. B. BROWNE, Ltd., 163, Queen Victoria St., E.C.

HORA'S
*Howards' Seidlitz Powder.
English Tartaric Acid.
Hand-weighed.*

P.B. SEIDLITZ
Perfectly folded.
POWDERS.
4/6 per Gross.

47 MINORIES, LONDON.

GLYCERINE

BEFORE CONTRACTING FOR
WINTER SUPPLIES
PLEASE GET OUR PRICES.

JOHN MOSS & CO.
Galen Works, Wilson Street, LONDON, S.E.

COD LIVER OIL

CONDY'S FLUID.

ELEVEN INJUNCTIONS

With damages and costs, have been obtained against Chemists selling a liquid not manufactured by Condy and Mitchell, Ltd., in execution of orders for "CONDY'S FLUID."

We invite the co-operation of a pushing Chemist in every Town.

WE will advertise YOU in a direction that must result advantageously.

Write

HORLICK and Co.
39 Snow Hill,
London, E.C.

ITROSYL

Never loses strength, never evaporates. Is equally unaffected by the hottest climate of the tropics and by the temperature of the frigid zone.

Fletcher, Fletcher & Co., Holloway, London.

Editorial Comments.

SIR J. LISTER ON MEDICAL SCIENCE.

THE scientific basis of medicine and surgery is real enough to Sir Joseph Lister. Indeed, the unsophisticated reader of the address which he delivered to the British Association at Liverpool on Wednesday evening might judge from it that the art of healing had been developed by modern investigation to a system of treatment almost as exact as mathematics, and disturbed only by the ignorant obstinacy of such bodies as the Gloucester Guardians. Far be it from us to question the conclusions arrived at by so great an authority as the

famous surgeon, who combines in himself the functions of President of the Royal Society and President of the British Association. Most fervently we hope that all his sanguine assumptions and anticipations may be established, and that Koch and Pasteur, Behring and Roux, may be proved worthy of the incense which, on behalf of suffering humanity, Sir Joseph Lister burns before their altars.

Introducing his remarks by a reference to the already tested value of the Röntgen rays in surgery, Sir Joseph Lister intimated that "there is no reason to suppose that the limits of the capabilities of the rays have yet been reached. By virtue of the greater density of the heart than the adjacent lungs with their contained air, the form and dimensions of that organ in the living body may be displayed on the fluorescent screen, and even its movements have been lately seen by several different observers." So, too, the peculiar irritating effect of their action on the skin suggests the idea that the transmission of the rays through the human body may, by long-continued action, produce, according to the condition of the part concerned, injurious irritation or salutary stimulation.

This is the jubilee of anaesthesia in surgery. It had indeed, been foreshadowed in the first year of this century by Sir Humphry Davy, who, having found a toothache from, which he was suffering relieved as he inhaled laughing-gas threw out the suggestion that it might perhaps be used for preventing pain in surgical operations. But it was on September 30, 1846, when Dr. W. T. G. Morton, of Boston, after a series of experiments upon himself and the lower animals, extracted a tooth painlessly from a patient whom he had caused to inhale the vapour of sulphuric ether, that the idea was fully realised. Sir Joseph Lister stated that he witnessed the first operation under ether in this country. It was performed at University College Hospital by Robert Liston.

Some details of Pasteur's discoveries in regard to the action of ferments and putrefaction led the speaker to an interesting allusion to his own work in introducing antisepsis into surgery. "I have been often asked to speak on my share in this matter before a public audience," he said; "but I have hitherto refused to do so, partly because the details are so entirely technical, but chiefly because I have felt an invincible repugnance to what might seem to savour of self-advertisement. The latter objection now no longer exists, since advancing years have indicated that it is right for me to leave to younger men the practice of my dearly-loved profession." Then he went on to explain the process of the healing of a wound. If its surfaces are clean cut and can be brought into accurate apposition, it may unite rapidly and painlessly "by the first intention." This, however, is exceptional. More frequently healing has to be effected by way of "granulation," a layer of clotted blood putrefying, constituting a coarsely-granular coating of very imperfect or embryonic structure, destitute of sensory nerves and prone to throw off matter or pus, the products of putrefaction. The granulations thus form a beautiful living plaster, which protect the sensitive parts beneath from irritation, and the system generally from poisoning and consequent febrile disturbance. Meanwhile, the cells of the epidermis are perpetually producing a crop of young cells of similar nature, which gradually spread over the granulations till they cover them entirely, and a complete cicatrix or scar is the result. This, said Sir Joseph, was a process which, when it proceeded unchecked to its completion, commanded our profound admiration. It was, however, essentially tedious compared with primary union, while it was always preceded by more or less inflammation and fever. But it did not always proceed smoothly. The sore might become

larger instead of smaller, and neceration, or even hospital gangrene, might arise.

Struck by Pasteur's observations, Lister conceived the idea that if the wound could be treated with some substance which, without doing too serious mischief to the human tissues, would kill the microbes already contained in it, and prevent the future access of others in the living state, putrefaction might be prevented, however freely the air with its oxygen might enter. "I had heard of carbolic acid," he says, "as having a remarkable deodorising effect upon sewage, and having obtained from my colleague Dr. Anderson, Professor of Chemistry in the University of Glasgow, a sample which he had of this product, then little more than a chemical curiosity in Scotland, I determined to try it in compound fractures. Applying it undiluted to the wound, with an arrangement for its occasional removal, I had the joy of seeing these formidable injuries follow the same safe and tranquil course as simple fractures, in which the skin remains unbroken." He came to use catgut for tying blood-vessels because he observed that, when protected by the antiseptic dressing from becoming putrid and therefore irritating, a structure deprived of its life not only caused no disturbance in its vicinity, but, being of a nutritious nature, served as pabulum for the growing elements of the neighbouring living structures. He found that carbolic acid could be used with as good an antiseptic effect in a diluted form, deprived of caustic action, and he stated his belief, as the result of long experience, that carbolic acid, by virtue of its powerful affinity for the epidermis and oily matters associated with it, and also its great penetrating power, is still the best agent available for purifying the skin around the wound. In his address Sir Joseph Lister also gave the reasons for believing that atmospheric dust does not affect blood. These he brought before the Berlin Medical Congress in 1890, and he asserts now with confidence that the irritation of antiseptic irrigation and washing may be dispensed with if proper precautions against the coarser forms of septic impurity are taken.

As an illustration of the success of his treatment of wounds, Sir Joseph Lister mentioned particularly the case of the Munich Hospital. In that institution hospital gangrene had been a growing evil from year to year, till at length the frightful condition was reached that 80 per cent. of all wounds became affected by it. Professor von Nussbaum despatched his chief assistant, Dr. Lindpaintner, to Edinburgh, Lister having by that time removed from the Glasgow University to occupy the chair of clinical surgery in the Edinburgh University, to learn the details of the antiseptic system. After his return all the cases were on a certain day dressed on the antiseptic plan. From that day forward not a single case of hospital gangrene occurred in the Krankenhaus. The fearful disease pyæmia likewise disappeared, and erysipelas soon followed its example.

Sir Joseph Lister, not unreasonably perhaps, seems to claim that his application of the germ theory to surgery acted as a powerful stimulus to the investigation of the nature of the micro-organisms concerned. He had noticed that hospital gangrene was not necessarily attended by any unpleasant odour; and he afterwards made a similar observation regarding the matter formed in erysipelas of infective character. As these non-putrefactive disorders had the same self-propagating property as ferments, and were suppressed by the same antiseptic agencies which were used for combating the putrefactive microbes, he did not doubt that they were of analogous origin; and he expressed the view that, just as the various fermentations had each its special microbe, so it might be with the various complications of wounds. This surmise was afterwards verified, and earnest

workers in different countries have cultivated the new science of bacteriology, and, while opening up a wide fresh domain of biology, have demonstrated in many cases the causal relation between special micro-organisms and special diseases, not only in wounds but in the system generally.

The remainder of Sir Joseph Lister's address dealt with the discoveries of Koch's *tubercle bacillus* and the *cholera vibrio*; of Pasteur's *chicken-cholera bacteria*, and especially of his hydrophobia treatment, which Sir Joseph evidently regards as an established triumph; Pfeiffer's *influenza bacillus*, and the recent antitoxins for the treatment of diphtheria, tetanus, and snake-poisoning. Sir J. Lister made no attempt to criticise any one of the statements put forward; he accepts in every case the favourable reports and ignores all others, and so concludes that "Medicine is no unworthy ally of the British Association—that, while her practice is ever more and more based on science, the ceaseless efforts of her votaries to improve what have been fittingly designated *Quæ prout omnibus artis* are ever adding largely to the sum of abstract knowledge."

CHLORINE A LA MOND.

THE "magnificent city of Liverpool" is fortunate this week, for she gives hospitality to what promises to be a record meeting of the British Association. In response, the Association starts with a series of sectional addresses which are far above the average standard, and of these the first place will certainly be given to Dr. Ludwig Mond's presidential address to the Chemical Section, as it was complimentary to the district. The subject was a brief history of the manufacture of chlorine. Dr. Mond recalled some facts which have been forgotten with the advance of time, but which have had marked influence upon the growth of the industry. He thinks that the alchemists must have known chlorine, for *aqua regia* was one of their principal reagents, and it was one of the gases evolved in making it; however, they let it pass, and it was left for Scheele, in 1774, to isolate the gas and name it "diphlogistic muriatic acid." Eleven years later Berthollet conceived the idea of utilising the colour-destroying powers of the gas for bleaching-purposes, and by 1789 he was preparing, at the chemical-works on the Quai de Javelle of Paris, the solution of potassium hypochlorite, which is still manufactured there, and known as *Eau de Javelle*. The knowledge of the process was brought to this country by James Watt, of steam-engine fame, who learned of it in Paris, and spoke of it to Charles Tennant, of Glasgow. By 1798 Tennant had commenced the manufacture of the bleaching-liquid, but instead of using expensive caustic potash he employed milk of lime, with equally good results, and this proved a most important step, for a year later Tennant began to try how dry hydrate of lime would absorb chlorine, and was thus successful in producing bleaching-powder. We have not got beyond that step in the intervening century, as all the efforts of chemists have been directed to improving the methods for preparing chlorine. In a masterly manner Dr. Mond sketched these efforts, and as it is scarcely possible to do his description justice in short space, we shall for convenience divide the discourse into three parts: *first*, the preparation of chlorine from muriatic acid and manganese oxide; *second*, its preparation from muriatic acid without manganese; and, *third*, the utilisation of the chlorine fixed in the ammonia-soda process. The manganese process was employed by Scheele and adopted by Berthollet, who used a mixture of salt, black oxide of manganese, and sulphuric acid. With the introduction of the Le Blanc soda process

the condensation of muriatic acid became a necessity. This was achieved by William Gossage's process, and the recovered acid was used with native manganese ores for making chlorine. It gave nothing like the theoretical yield, as the impurities of the ore neutralised much of the acid; but that did not matter to manufacturers, who had more than a living profit off alkali, and to whom muriatic acid was a waste product. But from the first the manufacturers were bothered about the manganese liquors, which they could not get rid of. At last, in 1868, Walter Weldon patented a modification of a manganese-recovery process proposed by William Gossage in 1837, and, with the assistance of Colonel Gamble and his manager, Mr. F. Bramwell, the process was carried to complete success. Weldon was not a chemist, but, said Dr. Mond, "he was a man of genius and great perseverance. He soon made himself a chemist," discovering that manganese oxides possess the character of weak acids, so that when a certain quantity of lime is added to the manganese liquors, iron, sulphuric acid, and other impurities are precipitated, and the manganese fixed as soluble calcium manganite. He made this a working process, and in it the impurities are allowed to subside, the clarified liquor then treated with more lime and air, whereby the whole of the manganese is obtained as peroxide, or Weldon mud, ready to act on muriatic acid again. The beauty of the process is that "it works without any manipulation, merely by the circulation of liquids and thick magmas, which are moved by pumping-machinery." With a few isolated exceptions the process has been adopted by every large manufacturer of chlorine in the world. One of the most notable exceptions brings us to the second part of the subject—viz., the manufacture of chlorine without manganese. Since 1845 there has been in operation at Tennant's works, St. Rollox, a process devised by Mr. Dunlop (Charles Tennant's grandson), which consists in treating a mixture of nitre and salt with sulphuric acid. The mixture of gases given off is passed through a vitriol-chamber, whereby the nitrous compounds are absorbed and utilised, then washed with water to remove hydrochloric acid, and the chlorine then used. The process is still going on at St. Rollox, but the manganese process is also used there, and the Dunlop process has not been adopted elsewhere. The Henry Deacon process also falls within the second category. This is a most ingenious process. Mr. Deacon was a student of thermo-chemistry, and from his studies came to the conclusion that if a mixture of hydrochloric acid with atmospheric air was heated in the presence of a suitable substance (he ultimately adopted copper) capable of initiating the interaction of these two gases by its affinity to both, it would, to a very great extent, be converted into chlorine with the simultaneous formation of steam, because the formation of steam from oxygen and hydrogen gives rise to the evolution of a considerably larger quantity of heat than the combination of hydrogen and chlorine. With the assistance of Dr. Ferdinand Hurter, he worked his process to theoretical and ultimately to practical, success. But it has one defect—viz., that only one-third of the chlorine is obtained as such, the rest being as hydrochloric acid. This arises from the presence of water in the hydrochloric acid and air mixture. The removal of the water has been successfully attempted by Robert Hasenclever, who passes the acid in a continuous stream through vats of vitriol, whereby it is literally dried. Air passes through the vats at the same time, and thus there is obtained a mixture of hydrochloric acid and air well adapted for the Deacon process. In this way the chlorine in the hydrochloric acid can be almost entirely obtained in its free state by the simplest imaginable means, and with the intervention of no other

chemical agent than atmospheric air. The Deacon process has now supplanted the Weldon process in nearly all the largest chlorite-works in France and Germany, and is also making very rapid progress in this country.

Coming now to the third part of the discourse, we see the influence of the ammonia-soda process upon chlorine manufacture. Up to this point Dr. Mond had shown his hearers how little concerned Le Blanc alkali-manufacturers were about muriatic acid, until they were compelled by public opinion to be more careful with their waste; but it was not until the genius of Ernest Solvay perfected in the sixties the ammonia-soda process, conceived by Dyar and Hemming thirty years earlier, thus bringing a formidable competitor in the field, that the old manufacturers gave attention to the minutiae of chlorine-manufacture, and tried to save every cubic foot of the valuable gas. Then also came attempts to recover chlorine from the ammonia-soda residues, and here Dr. Mond spoke with the authority of a master. So far efforts have been concentrated chiefly on the magnesia process for the isolation of chlorine. The liberation of ammonia from the ammonium-chloride residues is an easy matter, heating the solution with lime sufficing. But by no practical process can hydrochloric acid be recovered from the calcium chloride which is formed. Weldon and Pechiney found that when oxygen is passed over magnesium chloride, heated to a high temperature, chlorine is obtained, and that gave the clue to a process which has since been carried on successfully at Salindres, and which consists substantially in treating the ammonium-chloride liquors with magnesia, thereby getting a solution of magnesium chloride; but Dr. Mond's objection to the process is that it is no more successful than other chlorine-saving processes in recovering ammonia. He has himself, however, devised a process which is based upon the same reaction, and consists in passing ammonium-chloride vapour through a vessel filled with pills composed of magnesia, potassium chloride, and china-clay, the magnesia being the essential element. The ammonium chloride used is very pure, and is vaporised in cast-iron retorts lined with Doulton tiles. From the retorts the vapour passes to large upright wrought-iron cylinders, which are lined with fire-bricks, and filled with magnesia pills. The pills are heated to a temperature of about 300° C. On its passage through the pills the chlorine in the ammonium-chloride vapour is completely retained by them, the ammonia and water-vapour formed pass on and are condensed. The reaction of the ammonium-chloride vapour upon magnesia being exo-thermic, the temperature of the pills rises during this operation, and no addition of heat is necessary to complete it. The temperature, however, does not rise sufficiently to satisfactorily complete the second operation—viz., the liberation of the chlorine and the re-conversion of the magnesium chloride into magnesium oxide by means of air. This reaction is slightly endo-thermic, and the necessary temperature—viz., 600° C.—is obtained by passing through them a current of a dry inert gas, free from oxygen, heated by a Siemens-Cowper stove to the required temperature. The gas used is that which leaves the carbonating-plant of the ammonia-soda process. And so the reaction goes on. This process has been in operation on a considerable scale at Brunner, Mond & Co.'s works for some years, and has fully attained Dr. Mond's object—viz., to enable the ammonia-soda process to compete, not only in the production of carbonate of soda, but also in the production of bleaching-powder, with the Le Blanc process. He has, however, held his hand until he saw how the electrolytic methods are to succeed. This brought him to the conclusion of his address. In regard to

these processes, he said that only two are in operation on a large scale—viz., in the neighbourhood of Stassfurt—but the details of the plant are kept secret. He spoke favourably of Castner's process, but was careful to say that he did "not believe that the easiest way of effecting chemical changes will ultimately be found in transforming heat and chemical affinity into electricity, tearing up chemical compounds by this powerful medium, and then to recombine their constituents in such form as we may require them." He has confidence that chemical action can get along very well by itself.

A LEGAL VIEW OF THE DENTISTS ACT.

THE solicitor whom we consulted in regard to the advisability of "fighting the dentists" has, in turn, taken counsel's opinion, and writes to us as follows:—

The Stipendiary Magistrate of Cardiff has evidently misunderstood the Dentists Act of 1878. Like many others who are called upon to interpret Acts of Parliament, he has proceeded upon the assumption the Act embodied what he conceived it ought to have embodied, and not what was actually enacted by the Legislature. The learned Stipendiary evidently laboured under the misapprehension that the practice of dentistry was rendered illegal, whereas it is only the assumption of borrowed plumage that is aimed at.

It must be borne in mind that all Acts of Parliament are more or less a compromise of conflicting interests, and when the Bill was before Parliament there were, no doubt, deputations of various persons who had drawn teeth from time immemorial to local members, who breathed out dreadful threats if their vested interest were not taken into account.

The Magistrate seems to have got himself mixed up over the arguments about the meaning of the words "specially qualified." No doubt, it is a difficult matter to say what those words are intended to cover. It might be argued, for instance, that if a chemist were to put up "teeth extracted" he would be exempt from prosecution, whereas if he put up "teeth carefully extracted" he would be liable.

If the Magistrate had carefully read the Act itself, especially section 4, he need not have troubled about the words at all. The latter section, we think, places the intentions of the Act beyond all doubt.

Section 3 says: "From and after the first day of August, 1879, a person shall not be entitled to take or use the name or title of 'dentist' (either alone or in combination with any other word or words), or of 'dental practitioner,' or any name, title, addition, or description implying that he is registered under this Act, or that he is a person specially qualified to practise dentistry, unless he is registered under this Act. Any person who, after the 1st day of August, 1879, not being registered under this Act, takes or uses any such name, title, addition, or description as aforesaid, shall be liable, on summary conviction, to a fine not exceeding 20/-, provided that nothing in this section shall apply to legally qualified Medical practitioners."

An addition to the above section has been made by the Medical Act of 1883, which is as under:

"It is hereby declared that the words, title, addition, or description, where used in the Dentists Act, 1878, include any title, addition to a name, designation, or description, whether expressed in words or by letters, or partly in one way and partly in the other."

These words, if anything, abridge the previous enactment; but section 4 of the Act of 1878 considerably curtails the area of prosecution. That section, so far as is material, is as follows:

Sec. 4. "With respect to the offence of a person not registered under this Act taking or using any name, title, addition, or description as above in this Act mentioned, the following provisions shall have effect:

2. "A prosecution for such offence shall be instituted only as hereinafter mentioned.

"If a person takes or uses the designation of any qualification or certificate in relation to dentistry or dental surgery which he does not possess, he shall be liable, on summary

conviction on such prosecution as hereinafter mentioned, to a fine not exceeding 20*l.*"

The two sections read together make it perfectly clear that it is not the practice, but the pretended qualification, that is aimed at.

The practice of dentistry by unregistered persons is, in fact, more or less sanctioned by the Act itself in the following section:

Sec. 5. "A person registered under this Act shall be entitled to practise dentistry and dental surgery in any part of her Majesty's dominions, and from and after the 1st day of August, 1879, a person shall not be entitled to recover any fee or charge in any court, for the performance of any dental operation or for any dental attendance or advice, unless he is registered under this Act or is a legally qualified medical practitioner."

This section penalises the unregistered practitioner by making his fees irrecoverable; but there is no other penalty.

An unregistered person, therefore, stands in the same position as a physician or a barrister, whose fees are not recoverable at law, but have to be paid all the same. In fact, there is no class of persons who suffer so little from bad debts as the two last-named professions.

It is a great pity that the Cardiff Magistrate was not asked to state a case for the Queen's Bench Division within the appointed seven days, as no doubt he would thereafter have been able to interpret the Act more in accordance with the intention of the Legislature.

There appears to have been no direct decision as to the meaning of the words "specially qualified"; but chemists ought to be careful to make it clear that they are chemists, and so bring themselves within the veterinary chemist case—although, perhaps, taking the Act strictly, there is no reason why they should do so. In fact, so far as our opinion goes, there is nothing to prevent a working tinsmith from adding artificial-teeth manufacturer to his advertisements. It will be, however, a safeguard if the word "chemist" be prominent in all chemists' advertisements connected with their dental department, and if there is any difference in the size of the letters the word "chemist" should be the more prominent.

The prevention of imposture is the thing intended to be guarded against by the Act, and if it is quite clear that there is no intention to deceive, and no use of the word "dentist" or "dental practitioner," or any such definition of qualification or certificate as is referred to in Section 4, we do not think there is a very high chance of the British Dental Association sustaining a conviction in the High Court.

We sent the following letter to the Secretary of the British Dental Association on Saturday of last week:—

The Secretary British Dental Association,
40 Leicester Square.

SIR,—Consequent on the decisions of the Cardiff Stipendiary Magistrate in several recent cases under the Dentists Act, in which your Association prosecuted, many chemists with more or less dental practice have written to us. Legal advice has been taken, and the result is that a fund has been subscribed with the object of getting a test-case decided in the High Court. Our purpose in writing to you now is to ask if your Association is willing to agree with us as to the case to be contested. We can, of course, get a case without troubling you at all, but we should like to conduct this dispute with all possible courtesy, and we think it would be more satisfactory to both sides if a question could be provided the decision of which should settle the claims of registered and unregistered practitioners equally.

I am, Sir,
Yours faithfully.
THE EDITOR.

In reply to this the Honorary Secretary has asked us to give him full particulars, and we have furnished him with the published correspondence, comments, &c, on the subject (including the letter last week from Mr. Oglesby, of Birnsley, offering five guineas to the Dental Association, which we hope they will secure).

We have to acknowledge fourteen further promises of subscriptions to our fund—namely, two of 3*l.* 3*s.* each, three of 2*l.* 2*s.* each, five of 1*l.* 1*s.* each, one of 1*l.*, one of 10*s.*, and two of 5*s.* each. Against this, however, we have to report that the promise of 5*l.* 15*s.* 6*d.* from the Unregistered Dental Practitioners' Association is withdrawn, as the money was subscribed "for Bamber's case only." This condition was obviously an impossible one, so we shall have to rely on chemists' promises only. The amount we can reckon on now only figures at 110*l.* 1*s.* 6*d.*, which tends to make us a little peaceably disposed. Every extra guinea promised will help to stir us, and we trust dilatory friends will in the course of next week rouse us to absolute ferocity.

THE OTTO-OF-ROSE MARKET.

The annual comedy known as the "fixing of the otto-of-rose price" by the Bulgarian and Turkish exporters has not yet been performed—at least, so far as the information in the possession of the London agents for the principal distillers and merchants is concerned. In the meantime, however, several important consumers and other buyers are making contracts for their requirements of new otto of rose by private arrangement, and it is difficult to see what the leading Constantinople firms can gain by delaying so long an announcement, which all interested in the article know must be published sooner or later—viz., a considerable decline upon their last year's quotations, which are still nominally in force. It is pointed out that in 1895 the fixing of the otto-of-rose prices was put off until the unprecedentedly late period of the middle of October, and it is now said that the stiff-neckedness of the Bulgarian peasants, who appear to be becoming less squeezable than they used to be, and the "Armenian troubles" in Constantinople are the causes of the delay. To the unmotivational onlooker on the rose-market the "Armenian troubles" appear to have about as much connection with the otto-of-rose business as they have with Dr. Nansen's journey, but they seem to serve a certain purpose when judiciously used by speculators.

During the last few years the otto-of-rose market has been subject to unusual fluctuations, and to previously unknown speculative moves and counter-moves, during the time between the close of the distillation-season and the opening of the autumn campaign. A few wealthy firms of merchants, in whose hands lay the undisputed mastery of the otto-of-rose business, have seen their domain invaded by younger but more enterprising Bulgarian houses, and are desperately trying to preserve the old methods and customs of the trade from innovations based upon modern tests for purity, such as the determination of the physical constants. With this object in view they have for some years made a dead-set at the innovators, and on one occasion they are said to have actually succeeded in forcing the latter to purchase otto of rose at higher rates than those at which the would-be modernisers of the trade had sold, by buying up all the available supply as soon as it was known that their young competitors had entered into certain large contracts with consumers.

We quite admit that, in the present state of our knowledge of the chemistry of otto of rose, no absolutely reliable chemical and physical purity-tests for every form of adulteration are available. Mr. Jedermann's conclusion of his recent exhaustive paper on the subject (see *C. & D.* August 29, page 349) pointing out that the nasal organ remains, after all, the principal test for the purity of otto of rose, is one for which there is much to be said; but, nevertheless, olfactory acuteness may be most carefully assisted by chemical examination. Human nature, however, is almost painfully adverse to change in Bulgaria as well as elsewhere, and it need

therefore, occasion no surprise that the reforming zeal of the younger Bulgarian houses should meet with little encouragement on the part of the older firms. Our Bulgarian correspondent, who has peculiar means of knowing the true inwardness of the otto-of-rose market, writes as follows on this subject, as well as on the interesting topic of the general market position of the article, under date of September 9:—

"The price of the new otto of rose has at last been declared—*i.e.*, so far as Bulgaria is concerned. On September 3 the rose-growers of Enina, one of the principal rose-villages in the district of Kezanlik, accepted the price which had been offered to them by the exporters for the last three weeks—viz., 30c. (or, say, 3d.) per degree Réaumur for pure otto of the 1896 crop, with a freezing-point of 16° R. (68° F.), and about 6 per cent. less for otto with a freezing-point of 15° R. (65.75° F.). These prices are equivalent to 26s. 8d. per Turkish oz. for the first-named, and 25s. per Turkish oz. for the last-named variety. This price, as predicted in my former communications, is about 30 per cent. below that of 1895, and is a very reasonable and moderate one, considering the admittedly high rates paid for the fresh rose-leaves this season. Moreover, a considerable point has been gained by those who have been advocating the abandonment of the all-too-prevalent practice of adulteration, by the general acceptance of the principle of rejecting, as suspect, all otto of rose showing a freezing-point below 15° R. If this plan should be adhered to in all the other rose-villages, it will give a decided check to the practice of adulteration by the rose-growers. There remain, however, the exporters to be considered; and, in order to stimulate the zeal of these gentlemen for walking the path of commercial straightness, buyers should insist upon being supplied with otto of rose of the following physical constants:—Freezing-point, 65°–68° F.; sp. gr. (at 86° F.), .850–.856; opt. rot., -2.3 to -2.7. These figures cover pure otto from all the 153 rose-villages in Bulgaria, and an otto of a freezing-point below 65° F. may safely be suspected of being adulterated with geranium oil. The purchase of otto per degree of freezing-point is no new thing in Bulgaria; but in former years admittedly adulterated parcels found ready buyers at prices corresponding to their quality: this year, for the first time, they were steadfastly rejected. The crop has been so abundant, and of such excellent quality, that there is plenty of pure otto to satisfy all needs, if only buyers will exercise sufficient care. As three-fourths of all adulteration is done by the otto-of-rose exporters, these gentlemen should be very carefully watched."

So far our correspondent, whose warnings we commend to otto-of-rose buyers. The extent to which adulteration still prevails in Bulgaria, in spite of all efforts to expose it, and notwithstanding the prohibition of the importation of Turkish geranium oil, the chief adulterant, is shown by the fact that an accusation against a well-known distiller in Bulgaria of having systematically added geranium oil to his still-charge, and distilling it over along with the rose-flowers, is now in the hands of the authorities. This year about 1,550 lbs. of geranium oil are said to have been smuggled into Bulgaria in kerosene-tins.

"TRUTH" ON CHEMISTS' PRICES.

THIS is *Truth's* rejoinder to our comment on certain statements about varying prices charged for some unnamed medicine which appeared in that journal a fortnight ago:—

I am sorry THE CHEMIST AND DRUGGIST should have jumped to the conclusion that I expected it to reply to my paragraph concerning chemists' charges. I am always sorry when I see an esteemed contemporary making itself ridi-

culous. This is what has happened on the present occasion. My readers will remember that I referred to the fact of three different chemists having charged three different prices for making up the same prescription, the price in the first case being 10d., in the second 1s. 3d., and in the third 1s. 9d. I asked why there should be such variations in the price for the same stuff. THE CHEMIST AND DRUGGIST says it cannot answer the question because I gave "such vague information," and failed to describe precisely "the character of the medicine." This, of course, completely misses the point, which was the vast discrepancy in the charges of the three chemists for making up exactly the same prescription. Seeing that the same medicine was supplied by each tradesman, its "character" is wholly immaterial. My contemporary goes on to say that there are also variations in the prices of newspapers. How anybody could come to make such an absurdly irrelevant, such a childishly feeble retort passes my comprehension. There might have been something in it if different prices were charged for the same newspaper; but as it is the remark is perfectly meaningless. THE CHEMIST AND DRUGGIST should really see whether it cannot make some better defence of its clients, and I will give it a further chance by citing another out of the numerous cases that have been brought to my notice. A week or so ago a lady bought a bottle of sulphate of quinine at a chemist's at Dover, and had to pay 2s. for it. A few days later she bought a precisely similar bottle of the same drug at some stores in London, and was only charged 6½d. for it. Is there any reasonable explanation of this difference of 1s. 5½d. in the price of the same article? and if so, what is it?

It is extremely difficult to discuss a question of pharmaceutical concern with a writer whose comprehension is so limited as, according to his own confession, is this person's. But, in the belief that his criticisms are made in ignorance rather than in malice, we will make a serious attempt to instruct him. We ask, How is it possible to check statements so indefinite as those first made in *Truth*? He says the same medicine was supplied in each case. We respectfully assure him that he is not competent to make such an assertion. There is scarcely a medicine prescribed the quality of which and the price of which do not vary in a greater or less degree. What *Truth* would call "the same drug" is often sold in Mincing Lane at 10s. per cwt. and perhaps in the same sales at 50s. per cwt. There are two kinds of James's fever-powder to be had. One costs 8s. or 9s. per cwt., the other not so many pence, and no analyst could detect the difference, though the patient might. One pep sine can be bought at about the same price per oz. as another is sold at per lb. Salicylic acids might also be named, and scores of other drugs and chemicals, any one of which may, for aught we know, have entered into the composition of the medicine bought. Some years ago, when Cetewayo was in England, the Colonial Office authorised the dispensing of a prescription for some pills for him, in which a large quantity of musk was used. The pills cost between 20*l.* and 30*l.*, if we remember rightly, and the prescriber was astonished at the charge, fearing that the Colonial Office would object. They had been dispensed by an eminent West-end chemist, who never used anything but the best drugs, and in this case he had paid some 8*l.* per oz. for the musk, though he could have bought "musk" at not much over 1*l.* per oz. It was proved that his profit on the transaction was not more than 10 per cent. Do not these instances prove that it is impossible to discuss the reasonableness of the price of medicine dispensed without an exact copy of the prescription? As to the specific instance given, it can only be replied that if the facts are correctly stated there was an enormous discrepancy. But knowing as we do how inexact lady customers and sensational journalists often are, we see no purpose in guessing at possible explanations of a statement which there is no opportunity of verifying.

A GRAND BOOK.

Our printers have handed to us a letter they have received from a gentleman in Durham who asks them to send a catalogue of veterinary books. He has seen "Veterinary Counter-Practice," but cannot understand the prescriptions "as they are given in Latin." But he knows a good thing when he sees it, no matter what the language it is given in, for he adds, "It is a grand book." He explains, "I have commenced to keep cows, and I think a work of that sort would be very useful to me."

IS THIS TRUE?

We quote the following two paragraphs from the September number of the *Zoophilist*, the organ of the anti-vivisectionists:—

A continental experimenter on the brains of dogs has recently tried the effects of boring holes in the animals' skulls and inserting pepper corns in the brain-substance. The diabolical ingenuity of vivisectors in devising new forms of torture can only be inspired by Satanic agency.

It was stated at the Buda-Pesth Congress that the arch-vivisectionist, Goltz, calls the opponents of vivisection "the scum of humanity" (*huminitas*). Professor Goltz, it will be remembered, is the experimenter who cut off the breasts of dogs to test the maternal feelings of the animals for their puppies. As this man can only have an external resemblance to a human being, his opinions on "humanity" are of very little consequence.

If these statements are not true they ought to be contradicted on sufficient authority. If they are true, they cannot be justified even though all the scientific men in the world declare the experiments to be of value.

"UNDER CONSIDERATION."

Mr. Luxmoore Drew, the Coroner who presided over an inquiry held last week at Fulham, touching the death of a girl, Eleanor Mulready, at the close of the proceedings commented on the fact that at present there is no legal restriction upon the sale of carbolic acid, and expressed a hope that before long some stringent restrictions would be placed upon the indiscriminate sale of this virulent poison. A correspondent, who drew the attention of the President of the Local Government Board to these remarks, and pointed out that similar views had for years past been strongly expressed by coroners throughout the country, by the Pharmaceutical Society, and by the British Medical Association, who had constantly urged the necessity for the inclusion of carbolic acid in the poisons schedule of the Pharmacy Act, has received the following reply:—

Privy Council Office, Whitehall,
September 15.

SIR,—With reference to your letter of the 10th inst., addressed to the President of the Local Government Board, and forwarded by that department to this office, I am directed by the Lords of the Council to state that the question of imposing some restrictions on the sale of carbolic acid is under the consideration of their Lordships.

I am, Sir, your obedient servant,
J. H. HARRISON.

We are surprised that even a Government official should not be ashamed to repeat this threadbare reply. The "Lords of the Council" have had this pressing subject "under consideration" for at least twenty years, and hundreds of victims of their indecision have been sacrificed meanwhile. This country has gone into dozens of great wars with a fraction of the "consideration" which, if we are to believe official statements, has been devoted to this question. What is there to consider? There is a statute which prescribes certain restrictions on the sale of poisonous, and provides that other substances shall be added to the schedule by the Privy Council from time to time as occasion may require. Has not carbolic acid even yet established its claim to be con-

sidered a poison? And who are these "Lords of the Council" who take it upon themselves to defeat the obvious intention of an Act of Parliament in this way?

FIN DE SIECLE.

Mr. W. T. Lynn, writing to *Nature* about "the last day and year of the century," mentions that he believes that our Lord was born towards the end of the year B.C. 5; so that the present year is the 1900 after the birth of Christ. That statement seems anomalous, but Mr. Lynn says "that as there was no year 0, and B.C. 1 immediately preceded A.D. 1, the interval from any date in a B.C. year to the same in an A.D. year is found not by simply adding the respective years, but by afterwards subtracting 1 from this sum." He also adds: "It is clear, then, that 1900 years from the birth of Christ (reckoning it as we do from the end of B.C. 1) will not be completed until the end of December 31 in that year, the twentieth century beginning with January 1, 1901—that is (to be exact), at the previous midnight, when the day commences by civil reckoning."

COUNTER-PRESCRIBING.

Dr. Victor G. L. Fielden, of Belfast, thinks there is a word to be said for chemists who go in for counter-prescribing. He points out in the *British Medical Journal* that chemists who become doctors rarely dispense, although they have exceptional competence in that direction, while it is doctors with three months' training in dispensing who are most eager to dispense, and condemn chemists for prescribing. "I often think," Dr. Fielden continues, "that the chemist is more sinned against than sinning; and I certainly agree with Dr. Bateman that 'if medical men would only do away with dispensing, chemists might give up the illegal branches of their trade.' I have heard it said that so long as doctors dispense chemists will prescribe, and I believe it." The doctor is right.

WHERE ARE WE?

Argon, helium, and Röntgen rays are leading topics in Liverpool this week. Sir Joseph Lister spoke about all of them. So did Dr. Mond; and Professor Thomson's address to the Mathematical and Physical Section was about Röntgen rays chiefly. There is an air of mystery about the whole thing which is distressing to those who think they know something. Said Dr. Mond, in the last sentence of his address: "Lord Rayleigh and Professor Ramsay have now abundantly proved that argon and helium are certainly elementary bodies, inasmuch as they cannot be split up further, but are not chemical elements, as they possess no chemical affinity and do not enter into combinations." It takes a lot of thinking before one can formulate elements into the chemical and non-chemical. Again, Mr. William Crookes, who devotes his annual *Chemical News* address to students, says (in bigger type than usual, so that it must be taken with due decorum):—

Discoveries have been lately made of a novel character, such as may possibly modify the course of future research. Thus it is very probable that argon and helium are not merely isolated bodies hitherto unknown, but that they are the types of a new class of elements which may seriously modify our general views. Technically, indeed, these elements may be of little direct moment, but their indirect bearings may be for the present beyond our ken. The grand question of the elements as modifications of protyle, or as mere delusory and ultimate essences, has not been advanced any nearer to a definite solution, but our suspicions of their modifiable character are certainly becoming more justified. Young chemists who have time at their disposal might very advantageously employ it in this direction.

We understand that Professor Norman Lockyer is to speak at the British Association about the new class of elements referred to, and there is no one better able than Mr. Crookes to speak on the subject of the penultimate sentence; but to say things like the above to students who have to learn all they can about hydrogen explosions, H_2S and other smells, is very naughty. We are pleased, however, to note the last sentence. It is a justification of a certain argon research which passed into history unjustified.

Marriages.

BARCLAY—INNES.—On September 15, at the Old Meeting Church, Birmingham, by the Rev. Joseph Wood, Thomas, younger son of Thomas Barclay, J.P., of Arncliffe, Moseley, near Birmingham, to Louisa May, second daughter of John Innes, of Harborne Hill House, Edgbaston.

BLOTT—CLARK.—On September 8, at the Parish Church, Irthingborough, by the Rev. J. K. Taylor, vicar, Hugh Russell Blott, chemist and wine and spirit merchant, Irthingborough, to Ellen, youngest daughter of D. Clark, Irthingborough.

BOEHM—TRAENE.—At Cologne, on September 12, Fred. Boehm, of Jewry Street, E.C., and South Hampstead, to Fräulein Leonie Traene, of Cologne.

DAVIS—BECK.—On September 15, at St. Paul's, Upper Norwood, by the Rev. R. B. Ransford, M.A., vicar, Frederick Davis, of Arundel Road, Croydon (principal of the Newington College of Chemistry and Pharmacy), to Ethel Harvey, second daughter of Thomas Beck, of Alfriston, South Norwood Park.

FREEMAN—COLLINS.—On September 2, at St. Giles's, Nether Whitacre, by the Rev. L. F. Vane S. de Heriz, assisted by the Rev. H. W. Gilbert, John Henry, second son of John Freeman, chemist, of Icknield Street, Birmingham, to Mabel, second daughter of Walter H. Collins, of Whitacie.

WALKER—DAVEY—On September 16, 1871, at All Saints' Church, Dalston, by the Rev. Thos. Doughty, Henry Walker, publisher of THE CHEMIST AND DRUGGIST, to Grace Ann Davey. (Silver wedding.)

Deaths.

BURBIDGE.—Mr. Thomas Burbidge, whose death at Brighton we announced last week, entered the wholesale firm of

Burgoyne & Co. as a partner in 1853. A little later his brother Frederick, who predeceased him by a couple of years, also became a partner in that house, and Mr. Burgoyne retired. The two brothers remained at the head of the business until 1876, when they were joined by Messrs. Cyriax and Farries, who, together, had been carrying on a merchant's business in the City, and the last-named of whom had been previously connected with the firm of Burgoyne &

Burbidges. After the admission of Messrs. Cyriax and Farries the two brothers Burbidge retired from active business, the gentleman now deceased taking up his residence at Brighton. Mr. Thos. Burbidge had been an invalid for nineteen years. We understand that the employés of his firm will benefit by his will.

PARKIN.—Alderman Joseph Brooks Parkin, of Ripon, chemist and druggist, died at Southport on September 9. The late alderman had taken an active part in the public life of Ripon for many years. He was born in 1839 at Bishop Thornton, educated at Ripon Grammar School, was afterwards apprenticed to the late Mr. Brown, chemist, and commenced business on his own account in 1867. He was elected a member of the Corporation in 1870, and was a member of the Council for twelve successive years. After



being absent from the Council for eight years, he was re-elected in 1890, when he was also placed on the commission of the peace for the city. In November, 1892, he was elected Mayor of the city, and was at the same time made an alderman. He was a Past Master of the De Grey and Ripon Lodge of Freemasons 837; Provincial Grand Deacon of West Yorkshire Mark Masons; P.Z. and acting treasurer of the Marquess of Ripon Chapter; and P.M. of the Prince Leopold Lodge of Mark Masons 352. He was a Conservative in politics, and senior churchwarden at the Cathedral. The present Mayor (Lord Ripon) when informed of Alderman Parkin's death, intimated that he desired to attend the funeral and to invite the members of the City Council to accompany him. The funeral, which was a public one, was held at Ripon Cathedral on September 11.

TOMLINSON.—On September 16, at 2 Tindal Square, Chelmsford, Sydney James, only son of James and Alice Tomlinson. Aged 22.

Some Specialities.

D. R. AUFRECHT. of Berlin, has reported upon some new products which have found their way into the German market. It is a common practice there to make the composition of chemical products known, so far as analysis will tell. Subjoined are the particulars regarding the last batch:—

Microbrom.—An antiseptic liquid, introduced by Messrs. Read Holliday & Sons, Huddersfield. Consists of about equal parts of coloured carbolic acid and glycerine. The Vacana Household Soap, introduced by the same firm, contains about 2 per cent. of crude carbolic acid, combined with a soda-soap.

Mouche de Milan.—A brownish-green plaster, made from a basis of cantharides, wax, turpentine, and oil.

Skriptol.—An ink extract, introduced by Mr. Krüger, a Goldberg apotheker, is a concentrated gall ink, with much dextrin in it, the colour being heightened with nigrosin. A mixture of 1 part of skriptol with 20 to 25 parts of water is a good ink.

Oxydin.—An adhesive solution, consisting of shellac 3, petroleum 2, and methylated spirit 95.

Snuff powder.—A mixture of hellebore and charcoal.

New Remedies.

Antidiabeticum is the trade-marked name of glycosolvol. It is obtained by the interaction of oxypropionic acid, peptone, and a theobromine compound with the zymogen of trypsin. It is chiefly remarkable for its power of breaking down carbohydrates, and for this reason it has been used in diabetes mellitus with good results. Therapeutic investigation showed that diabetic urine containing 1 to 7 per cent. of glucose was rendered perfectly free from sugar in from three to eighteen days, and urine containing 8 per cent. of sugar had that element reduced to between 1 and 3 per cent. It is given in conjunction with jumbul after the sugar has been materially reduced.

Eosote.—Creosote valerianate has been introduced, under the name of "Eosote," as a remedy for tuberculosis and gastric-intestinal disorders.

Geosote is the new name for guaiacol valerianate. Like guaiacol itself, it is a remedy for tuberculosis.

MESSRS. WM. GARDNER & SONS, Gloucester, are showing their "Rapid" sifters and mixers at the Confectionery Exhibition, now open at the Agricultural Hall, Islington.

IT is not generally known that the late Mr. Ingram, who founded the *Illustrated London News*, had an interest in Parr's pills. He was a partner in Ingram & Cook, book-sellers, Chapel Bar, Nottingham, and they were the proprietors of the pills.

Trade Reports.

42 CANNON STREET, E.C., September 17.

IN drugs and chemicals there is very little improvement in trade to report, but the produce-market generally is more active, and there is more hopefulness all round, so far as the prospects for the autumn trade are concerned. The cinchona-auctions held on Tuesday were of moderate extent, but prices showed considerable firmness. Quinine, however, is easier to-day, after having been firm all through the week. In other chemicals there are few changes. The oxalic-acid convention has been renewed, but prices remain unchanged. Carbolic-acid crystals are somewhat firmer. Sugar of milk is quiet. Glycerine remains rather dull. Camphor is a shade firmer, both for crude and refined. Cream of tartar appears to be firming up a little, but citric and tartaric acids remain dull. To-day's drug-auctions were very small, two of the principal drug-brokers having agreed to abstain from offering any goods. The nine catalogues comprised only 898 lots, of which the unusually large proportion of 519 lots found buyers—a circumstance chiefly due to the fact that the bulk of the auctions consisted of Tinevelly senna, vanilla, and Chinese soy, a good part of which was practically offered without reserve. There were few alterations. Cape aloes is a trifle easier. Fine Sumatra benzoin brought extreme prices. Cardamoms, of which very little was offered, are dearer. Cubeb lower. Crude camphor about 5s. firmer for Chinese on the spot. Calumba scarce and steady. Buchu quiet. Fine lump dragon's blood sells at high rates. Menthol sick, and tending easier. Ergot of rye shows no improvement. Gamboge steady. Gentian root and powder rather firmer. Honey steady. Jalap neglected, but ipecacuanha very firmly held for both varieties. E.I. kino tending lower. Musk quiet. Myrrh remains cheap. Star-anise oil much higher, cassia oil firmer, citronella oil lower. Japanese peppermint oil easier, American very dull. Cod-liver oil sold well at auction. Privately the market is firmer. Tragacanth in improved demand. Turkish opium quiet, Persian rather easier. Orris tending firmer. Saffron very firm. Rhubarb unchanged. Sarsaparilla steady. Tinevelly senna sells well, with good competition. Chinese soy lower. Vanilla slightly easier. Beeswax steady. In drysalteries, oils, and spices we have to report a much firmer market for shellac. Chinese galls are dearer. Gambier is very firm, and so is Japan wax. Turmeric remains neglected. Zanzibar cloves have been in demand at firmer rates, but close easier. Pepper and pimento are steadier. Nutmegs again firmer. Chillies, cinnamon, and cassia lignea dearer. Cochin ginger remains dull of sale. Linseed oil quieter. Rape oil a trifle lower, but closing firm. Cottonseed oil dull. Cocoanut, olive, and palm oils are unchanged. Turpentine is firm. Petroleum slightly higher. The Bank rate remains at 2½ per cent. Bar silver is steady, at 30s. per oz.

Our New York correspondent cables on Thursday afternoon:—*Senega root* is dearer here; stocks are very low, and for Minnesota root 23c. per lb. is now required. New York *Curaçao aloes* extremely weak; for fair quality 2½c. per lb. would be taken. *Gum chicle* may be had at 25c. per lb. to-day. *Star-anise oil* is much higher; \$2.15 per lb. is to-day's quotation. *Mandrake root* is advancing. Mexican *Sarsaparilla* steady at 5½d. per lb. *Coca leaves* are very firmly held.

Our Hamburg correspondent wires on Thursday afternoon:—American *Peppermint oil* is lower. HGH Hamburg oil is offered to-day at 7.50m. per ½ kilo. Refined *Camphor* firmer at 3.30m. per kilo.

ACID (CARBOLIC).—*Crystals* are rather firmer, most of the English makers having disposed, it is said, of their output for the present year. For 39–40° C. crystals 6½d. per lb. is now asked, while the price of 34–35° C. is 6½d. per lb. Some of the manufacturers, we are told, have booked orders for their full capacity up to March, 1897. There is no change in the prices of *Liquid carbolic acid*, although the makers seem disposed to stand out for higher rates.

ACID (OXALIC).—The Anglo-Continental convention of oxalic-acid makers has just been renewed for three years, and for the present the old prices of oxalic acid and its principal derivatives will be maintained. This result of the negotiations, which have been pending for some time, was rather unexpected, for at the end of last week the convention was practically moribund, and one of its German members had already sent out reduced quotations for 1897 delivery. These have now been withdrawn.

ALOES.—*Cape aloes* (the only variety offered to-day) met with little demand. Prices are slightly easier, but no fine aloes were sold. Of 30 cases 10 found buyers at 20s. per cwt. for fair seconds partly dull, and 17s. 6d. per cwt. for ordinary quality.

ANNATTO.—Ten cases of good West Indian annatto-paste, an article now rarely seen at auction, were offered to-day. They elicited no bids, and were bought in at 2s. per lb.—1s. 6d. per lb. would probably be accepted. Fifteen bags seed from Madras were bought in, at 4d. per lb. for good bright and 3d. per lb. for common quality.

BALSAMS.—Of *Canada balsam* of fit 2 barrels of good quality were shown to-day, and bought in at 1s. per lb.; the owner requires 10d. per lb. Three cases thick *Peruvian balsam* were also shown, and a bid of 7s. 9d. per lb. was suggested for them.

BENZOIN.—*Siam gum* was not offered to-day. Fine *Sumatra* brings extremely high prices, while common grades are neglected. To-day, for instance, 7 cases fine well-packed bold almond seconds, old fracture, realised 9s. 10s. to 9s. 12s. 6d. per cwt. (it is said that 9s. 2s. 6d. per cwt. had been refused privately a few days earlier); while 37 cases were bought in, at 9s. per cwt. for ordinary dull III., fair almonds, and at 8s. 10s. for good seconds. Fifteen cases fine *Palembang gum* were bought in at 47s. 6d. per cwt., a bid of 40s. per cwt. being refused.

CALUMBA.—Seventy-two bags were offered to-day and bought in, 18s. per cwt. being refused for brownish sorts, while a slightly better parcel was bought in at 21s. per cwt.

CAMPHOR (CRUDE).—Little or no business is reported in this article. The tone is generally somewhat firmer, sellers not pressing forward supplies. On the spot a small quantity of *Formosa camphor* was sold privately to-day, at 125s. per cwt., which shows a very firm market.

CARDAMOMS.—The supply is extremely small, only seven packages being offered at auction to-day. There is every prospect that the advance, upon which we have had occasion to comment lately, will make further progress, very high prices having been paid privately lately. For *Seed* extreme prices are also paid; a few days ago a parcel sold at 3s. 4d. per lb. The following prices were paid at auction:—*Ceylon Mysore*, round and long medium palish grey, 2s. 10d. to 2s. 11d.; small to medium brownish, 2s. 8d.; mixed sizes, partly split, brownish, 2s. 5d.; ordinary brown split, 1s. 10d. per lb.

CASCARILLA still tending lower. There is, however, a steady demand at the reduced rates, 49 bales selling at auction to-day at 35s. per cwt. for small broken partly grey quill, and at from 23s. to 24s. per cwt. for dull broken partly greyish to pale brownish bark.

CHAMOMILES.—Belgian flowers unchanged. Importers are firm, but find it difficult to make sales. At auction 20 bales fair yellow flowers (1895 crop) were bought in. A bid of 35s. per cwt. was made for them, but the owner requires 42s. 6d. per cwt.

CINCHONA.—At the London bark-auctions on Tuesday, 1,288 packages were offered, including 567 Ceylon, 218 East Indian, 328 West African, 171 Java, and 4 Colombian. Competition was fairly brisk, and the bulk of the supply sold at fully steady prices, African barks selling particularly well. The unit may be placed at $\frac{1}{2}d.$ per lb. The following prices were paid:—*Ceylon* and *East Indian* barks: *Ledgeriana*, $1\frac{1}{2}d.$ to $4\frac{1}{2}d.$; *Officialis*, $\frac{1}{2}d.$ to $2\frac{1}{2}d.$; *Succirubra*, $1d.$ to $5d.$; *Hybrids*, $1\frac{1}{2}d.$ per lb. *Java*: *Ledgeriana*, $2\frac{1}{2}d.$ to $3\frac{1}{2}d.$; *Succirubra*, $3\frac{1}{2}d.$; *Hybrids*, $2\frac{1}{2}d.$ to $2\frac{1}{2}d.$ per lb. *W. C. African*: *Succirubra*, $2\frac{1}{2}d.$ to $2\frac{1}{2}d.$ per lb. *Soft Colombian*, $\frac{1}{2}d.$ per lb. At to-day's drug sales 18 serons *Loxa* bark of recent import sold at $10\frac{1}{2}d.$ to $11\frac{1}{2}d.$ per lb. for good, and from $8\frac{1}{2}d.$ to $9d.$ per lb. for rather thin and broken quill. A parcel of three serons was bought in at 1s. per lb., 11d. being refused. Twelve bales bold but damaged *Carthagena* bark in split quills were bought in at 7d. per lb., and a parcel of thin flat cultivated Bolivian *Calisaya* at 10d. per lb.

CLOVES.—Early in the week Zanzibar cloves were very firm, and a considerable business was done at $2\frac{7}{8}d.$ per lb. for January-March, and $2\frac{5}{8}d.$ per lb. for November-January delivery. Since then, however, the market has assumed a quieter tone, the brokers who operated for what is described as a syndicate of speculators having ceased buying for the present.

CREAM OF TARTAR.—The French market is reported much firmer. Recently, sales of good white crystals were made at 78s. 6d. per cwt., f.o.b. Bordeaux, but to-day's quotation from that port is 81s. to 82s. per cwt., f.o.b.

CUBEBS again several shillings lower. Fifty-four bags for black berries, with little stalk, from Singapore, sold in a string at 25s. per cwt., the first lot realising 26s. per cwt. Another fair lot of 10 bags from Singapore was bought in at 35s. per cwt.

DRAGON'S-BLOOD.—Fine quality scells readily at high prices, 9s. 10s. per cwt. being paid for a case of fine fiery lump from Singapore, containing a small proportion of dull quality. Seedy block of good bright colour was bought in at 8s. 10s. per cwt., ordinary dall at 6s. to 6s. 10s. per cwt. Fourteen cases were shown.

ERGOT OF RYE.—Several parcels of Spanish ergot, mostly very wormy, were offered to-day. Bold but wormy quality, for which $4\frac{1}{2}d.$ per lb. is asked, was bought in at 5d. per lb. Twenty-four bags sold, without reserve, at lower rates; 8 bags, fair small Russian at $4\frac{1}{2}d.$; 16 bags, extremely wormy, evil-smelling Spaish, at 3d. to $3\frac{1}{2}d.$ per lb.

GALLS.—There has been a considerable improvement in the demand for *Chinese* galls, of which the crop prospects are said to be very bad. About 400 cases have changed hands at from 54s. up to 56s. to 57s. per cwt., on the spot. Yesterday there were no sellers below 58s. per cwt., but to-day we hear that a little less would be accepted.

GAMBOGE.—The only parcel offered to-day was one of 13 cases fair Saigon, partly damp blocky and dull, partly good red in fracture. A bid of 8s. 2s. 6d. per cwt. was refused for it, the owner requiring 8s. 15s. per cwt.

GELATINE has again advanced by about $\frac{1}{2}d.$ per lb. all round. The present quotations range from 10d. to 1s. 6d. per lb., according to quality.

GENTIAN.—Good French root offers at 18s. per cwt. f.o.b., which is equal to fully 20s. per cwt. London terms, but some sales have lately been made on the spot at 18s. 6d. per cwt., showing a somewhat easier market. On the other hand, it is reported that there has been a somewhat improved demand for powdered gentian lately. Good French ground has been sold, it is said, at 21s. per cwt., and more money is now asked.

GLYCERINE quiet, but fairly well maintained in price.

GUM ACACIA.—A few lots of picked Turkish gums were bought in to-day at nominal prices. For fair paleish grain 6s. 10s., and for good pale picked, partly hard, 10s. per cwt. is asked; 40 bags fair glassy *Aiden* gums sold at 57s. 6d. per cwt.

HONEY.—All varieties were in very small supply to-day. *Jamaican* honey sold at firm prices, four packages realising 22s. per cwt. for dull brown thick, and 17s. for common dull grey. For ordinary candied *Chilian* honey a bid of 17s. 6d.

per cwt. was refused, 22s. 6d. per cwt. being the lowest acceptable price.

IODINE.—The present iodine-convention will come to an end on March 31, 1897. Its enforcement has led to the reduction of the iodine-shipments from the South American West Coast from 7,092 quintals (101 $\frac{1}{2}$ lbs.) in 1894 to 3,903 quintals in 1895. Of the exports in 1895 New York received 1,937; Hamburg, 1,061; and Liverpool, 905 quintals. Producers outside the convention exported 424 quintals in 1895, but it is expected that this "leakage" will be much reduced, if it does not disappear entirely, in the near future, inasmuch as one of the principal conditions of the new Nitrate of Soda Convention (which has lately been concluded) consisted in the entry into it of all the iodine-producers. Several new iodine-manufacturers have commenced subliming-operations within the past few months, and it is therefore expected that the shipments for 1896 will show an increase upon those of 1895. The stock in Europe belonging to the Syndicate amounted to 22,736 quintals at the end of 1895, and to 25,954 quintals at the end of 1894.

IPPECACUANHA.—Not a single bale of Brazilian root was offered at to-day's drug-sales, although 7 bales were placed "on show" at Crutched Friars in a semi-official manner. It is said that one of the brokers had given instructions to put 20 bales up for sale, but cancelled them when he found that his two chief competitors in the ippecacuanha business would not hold any auctions. He is reported to be asking 6s. per lb. privately for fair natural root. Five bags of *Colombian* (*Cartagena*) root were offered, and bought in, a bid of 4s. per lb. being refused for dull quality.

KINO.—It is reported that the new East African "Kano" gum is beginning to find purchasers in fair quantities. Good East Indian gum is selling privately at lower rates.

MANNA.—The following report concerning the prospects of the new crop has been received from a well-informed source:—"The weather has been fairly good lately, but the complaints that the trees do not yield a fair amount of manna continue. The market is exceedingly firm, and the few original cases which have arrived for sale at Palermo up to the present have found buyers at extreme rates. If the production should be again interrupted by rain, or even if, with a continuation of fine weather, the trees should not yield manna more freely than they have done so far, still higher prices must be anticipated. Selected large flakes, such as are generally required for packing tins, are expected to be exceedingly scarce this year, and as regards quality, it will, as a rule, be very poor." The present quotations are:—Large flakes, in original 56-lb. cases, 3s. 3d.; large flakes, in 7-lb. and 14-lb. wooden boxes, 3s. 7d.; large flakes, in 7-lb. and 14-lb. tins, 3s. 8d.; large flakes, in 1-lb. tins, 3s. 11d.; broken flakes, in original cases, 1s. 7 $\frac{1}{2}$ d.; sorts, in original cases, 1s. 2 $\frac{1}{2}$ d., all per lb., f.o.b. Palermo.

MENTHOL remains extremely dull of sale. For September-October shipment 6s. 9d. per lb., c.i.f. terms, would still be accepted. On the spot 8s. 9d. per lb. would probably be accepted.

MUSK.—Neglected. Only 6 tins of first-pile *Tonquin* pods were shown and bought in at 75s. per oz. for medium to bold thin blue and brown skin and underskin, well trimmed, but damp. Third pile blue thin skin pods rather damp were bought in at 42s. 6d. per oz.

MYRRH remains as dull of sale as ever. At auction, 104 packages were offered, and nearly all bought in, good bright pile *Adeu* picked at 5s. 10s., small ordinary sorts at 50s. per cwt. Two cases rather dark native picked sold at 85s. per cwt.

OIL (CASTOR).—Fifty cases fair *Calcutta seconds* sold to-day at 2 $\frac{3}{4}$ d. per lb.; another lot of 30 cases was bought in at 3d. per lb., and for 20 cases No. 1 *Calcutta* 3 $\frac{1}{4}$ d. per lb. is the price. A parcel of 23 cases good pale *Italian* oil was bought in at 3d. per lb. In Italy quotations are still advancing, 32s. to 32s. 6d. per cwt. being now quoted.

OIL (COD-LIVER).—At auction to-day two parcels, together 70 casks, of Norwegian cod-liver oil (J. R. H. Tromsøe) sold "without reserve, for account of whom it might concern." These lots consisted of oil of very good appearance, and were put up in consequence of a dispute between the original buyer and the seller. The first lot sold, with fair competi-

tion, at 172s. 6d. per barrel, bidding commencing at about 140s. One lot brought 175s, all the remainder 172s. 6d., excepting 10 packages, "imported *via* Hamburg," which realised from 170s. to 172s. 6d. per barrel. This sale shows a very firm market. Privately *Jervell's* oil is quoted at from 160s. to 175s. per barrel, according to quality. Our Bergen correspondent writes, under date of September 12:—"Business in cod-liver oil on our market remains very restricted, and prices show no alteration, best non-corgealing *Lofothen* being quoted at 160s., ditto *Finmarken* at 155s. per barrel, f.o.b. The exports from Bergen since the commencement of the season up to date amount to 3,613 barrels, against 3,900 barrels for the corresponding portion of 1895."

OILS (ESSENTIAL).—The principal feature in the essential-oil market this week has been the continued advance in *oil of star anise*, of which a considerable quantity has changed hands, mainly under speculative auspices. To-day 9s. 6d. per lb. was paid on the spot, a fair business having previously been done at prices rising up to 9s. 3d. per lb. There is now little offering on the spot at 9s. 6d., and it is confidently expected that last year's course of prices—when star-anise oil was run up to extremely high figures in the autumn—will be repeated. It is said that up to the present the 1896 shipments of oils of star-anise and cassia together from China have only been 1,200 cases, against 2,903, 4,400, and 4,400 cases respectively in the corresponding periods of the past three seasons. For arrival a good deal of business has also been done at 7s. 9d. per lb. c.i.f. for August—October (7s. 10d. per lb. now asked), and 6s. 10d. c.i.f. for October—December (7s. per lb. now asked). *Cassia oil* is also rather firmer; a sale of 60—65 per cent. oil on the spot is announced at 7s. per lb., but that business cannot be confirmed. For arrival there is not much offering; 6s. 6d. per lb. c.i.f. is the nearest quotation for 70—75 per cent. oil. At auction five cases star-anise oil were bought in at 9s. 6d. per lb. nominally. *Citronella oil* is lower; business is reported on the spot at 1s. 1d. per lb. for drums; the quotation in tins is 1s. 2d. per lb. For shipment lower rates have also been accepted, 10d. per lb. c.i.f. (drums) for shipment within three months, and 9 $\frac{1}{2}$ d. per lb. c.i.f. (drums) for shipment within six months. *Lemon grass oil* unchanged, at 2 $\frac{1}{4}$ d. per oz. Of *Eucalyptus oil* three cases from *Adelaide* sold to-day without reserve at 1s. 2d. per lb. Three cases "Platypus" (54.4 per cent.) are held for 2s. per lb. *American oil of peppermint* dull. H G H. has been sold on the spot at 7s. 6d. per lb. *Japanese peppermint oil* (dementholised) has been sold cheaply, at 2s. 9d. per lb. c.i.f. for October—December shipment. On the spot 3s. 10 $\frac{1}{2}$ d. per lb. is quoted.

OPIUM—The market for *Turkish opium* rules extremely quiet at practically unchanged prices. Only a few small lots have been sold. *Persian opium* is slightly easier with fair sales, chiefly of secondary quality, at from 10s. to 10s. 6d. per lb. Fine quality is quoted at from 11s. to 11s. 6d. per lb.

ORRIS—The continued wet weather in Italy is said to have greatly damaged the prospects of the new crop. New picked *Florentine* is not yet quoted, and for old selected 66s per cwt. is the quotation. It is thought that new *Florentine* sorts will shortly be offering at from 50s to 55s. per cwt., c.i.f.

QUICKSILVER.—There has been no change in price yet, but an advance is anticipated in many quarters, and the market closes with a very firm tone. First hand is quoted at 6s. 10s.; second, at 6s. 9s. 6d. per bottle.

QUININE has been firm, but closes easier. Second-hand holders have sold several small parcels of 1,000 oz., or thereabouts, at 11d. per oz. this week, but to-day it is reported that 30,000 oz. have changed hands at 10 $\frac{1}{2}$ d. per oz., and there are sellers at that figure. The makers are also busily soliciting orders at their recently-reduced quotations, which are now very near to the second-hand rates. So far, however, they do not appear to have made many contracts.

RHUBARB shows no alteration, although in some instances full prices were paid at to-day's auctions. Of 63 packages 30 sold as follows:—*Shensi*: small to medium, one-fourth dark, three-fourths fair pinky fracture, flat, 1s. 5d. per lb.; pickings, flat, very bold rough, 1s.; ditto, round and flat mixed, 10d. per lb. Good bright clean round druggists' root, even pinky fracture, realised 2s. 2d. per lb. *Canton*: small to medium fair pinky fracture, yellow coat, slightly wormy round, 10d. per lb.; medium to bold, good coat, half pinky,

half fair fracture, round, 1s. 1d. per lb. *High-dried*: dull coat, flat, partly rough, 9d. per lb.; round, dull coat and fracture, 8d.; dull, flat grey coat, 7 $\frac{1}{2}$ d. per lb.

SAFFRON is very firm. The prospects of the new crop are described as mediocre, but there is a fair supply of old stock, especially of ordinary qualities. The London quotations run from 30s. to 32s. per lb. for fine to superior *Valencia*, and from 23s. to 25s. per lb. for fair *Alicante*.

SARSAPARILLA—Steady. Six bales of *Grey Jamaica root*, catalogued for sale to-day, had been disposed of privately. One package of second-class damaged *Lima-Jamaica* is held for 1s. 2d. per lb. Of 7 bales, *Native Jamaica* 5 sold at steady rates: good red at 1s. 3d. (subject), dull grey at 9 $\frac{1}{2}$ d. to 10d. per lb.

SCAMMONY.—*Virgin Turkish scammony* continues to sell in a small way at 30s. per lb.

SENEGA.—About 1d. per lb. dearer. A few days ago ordinary quality could have been bought on the spot at 1s. per lb., but it is doubtful whether that figure would now be accepted. Telegrams from New York received to-day quote 11 $\frac{1}{2}$ d. to 1s. per lb., c.i.f., for *Manitoba root*.

SENNA—To-day's offerings consisted chiefly of new crop *Tinnevelly senna*. Of this variety, 594 bales were offered and almost all sold. Fine qualities, which were very sparingly represented, realised rather higher prices, but ordinary and medium grades were irregular. The bulk consisted of ordinary to fair partly yellowish small to medium leaf, for which from 1 $\frac{1}{2}$ d. to 2 $\frac{1}{2}$ d. per lb. was paid, medium to bold fair leaf realised from 2 $\frac{1}{2}$ d. to 3 $\frac{1}{2}$ d., good to fine bold bright from 3 $\frac{1}{2}$ d. to 4 $\frac{1}{2}$ d. per lb. For dark pods from 1 $\frac{1}{2}$ d. to 2d. per lb. was paid. Fifteen cases good, partly broken *Alexandrian* leaves were bought in; 10d. per lb. would be accepted for this parcel.

SHELLAC.—Much firmer. A large business has been done through the week at advancing prices, closing at 79s. to 80s. c.i.f. for *Orange TN*, October—December shipment. On the spot *TN orange* is worth 83s. per cwt. cash terms, and for free *Garnet AC* 83s. per cwt. has also been paid. At auction on Tuesday 520 cases sold at from 2s. to 3s. per cwt. advance.

SOY.—Lower. Of 243 casks *Chinese soy*, offered to-day, 203 were forced off, mostly without reserve, at from 9 $\frac{1}{2}$ d. to 10 $\frac{1}{2}$ d. per gallon for "extra thick," and from 9d. to 9 $\frac{1}{2}$ d. per gallon for "thick."

TEA.—The *Assam* sales this week have been the heaviest of the season, but so far from the quantity depressing the market, the large supplies have met with an excellent demand at firmer rates. Some of the big blenders appear to be a bit bare of stock, and have been buying freely, while fine to finest leaf and broken Indians are evidently wanted in Ireland, and have been taken at, in many cases, 1d. to 1 $\frac{1}{2}$ d. per lb. advance. On Tuesday *Ceylons* were in smaller supply, and very firm prices were paid.

TRAGACANTH.—A good deal of business has been done this week in all varieties of *Persian tragacanth* at full to slightly higher prices. For first pile druggists' quality 14l. to 14l. 15s. has been paid, and to-day a couple of very fine cases are reported to have changed hands at 15l. per cwt. Seconds are now quoted at from 13l. to 13l. 10s., thirds from 11l. 10s. to 12l. per cwt. *Smyrna tragacanth* remains difficult to sell.

VANILLA.—The supply at to-day's auctions amounted to 107 cases, weighing about 1,000 lb., and mostly consisting of rather damp *Mauritius* and *Seychelles* beans. Prices were extremely irregular, but showed on the average little change, the tendency being somewhat easier. A parcel of 21 cases *Tahiti vanilla* has just arrived *via* Auckland, N Z.

VARIOUS DRUGS.—*Matico*. For 10 bales partly good thick greenish but broken, partly spurious leaf, a bid of 1s. 2d. per lb. was apparently made and refused, and the lot was bought in at 1s. 8d. per lb. *Colocynth* firmly held, but in little or no demand. Ten cases fair *Syrian* were bought in at 2s. 6d., 16 cases broken *Spanish* at 1s. 3d. per lb. Forty-three bales dull wormy *Cassia fistula* from *Calcutta* were bought in at nominal rates. One case of good pale detached drop and grain *Gum ammoniacum* was bought in at 60s. per cwt. For 4 bales bright round green *Buchu-leaves*, 3d. per lb. is the price.

WAX (JAPAN).—Firm, with a rising tendency. The lowest price at which good pale squares can be had on the spot is 42s. 6d. per cwt., at which there are very few sellers.

Heavy Chemicals.

Heavy chemicals all round are rather quiet, and the American demand continues very poor, still somewhat better reports are in from the Tyne and the Clyde, where a fairly steady business has been done during the past week. At the same time the average is not up to what it should be for the time of the year. Bleaching powder meets with rather better inquiry, particularly for next year, and quotations for 1897 stand at 6s. 5s. per ton. Ammoniacal products are rather firmer in value. Recovered sulphur keeps scarce, and is very firm at late quotations. Soda crystals and Caustic soda firm; the former are moving much better for home consumption. Sulphate of ammonia very dull, and a further decline all round is to be noted. Beckton terms, 7l. 8s. 9d. to 7l. 10s.; Leigh, 7l. 8s. 9d.; Hull, 7l. 11s. 3d.; London, 7l. 12s. 6d. Beckton, October–December, is quoted at 8l. From Leigh last week 759 tons were exported. Benzols have again advanced: 90-per-cent. prompt, 4s. 9d.; October–December delivery, 4s. 7½d.; January–June, 4s.; 50-per-cent. prompt, 3s. 4½d.; October–December delivery, 3s. 4d.; January–June, 3s. 1½d. Aniline oil and salts very firm and with advancing tendency. Carbolic acids and especially crystals are quiet: crude, 75 per cent., 2s. 1d.; 60 per cent., 1s. 9d.; crystals, 34–35 per cent., 6d.; 39–40 per cent., 6½d. Anthracene of both grades is very quiet. Cream of tartar, both powdered and crystals, are a shade lower; the former is quoted 87s. to 90s. and the latter 85s. to 86s. Salts and Chlorates of potash and Soda are all dull. Arsenic unchanged. Yellow Prussiate of potash in better request. Linseed, mainly owing to large arrivals, are very weak, the brown acetate especially being very dull. Green copperas is unaltered, but both Lancashire and Welsh makes continue in strong request. Sulphocyanides weak and tending lower. South Durham Salt very firm at 9s. 6d., f.o.b. Tees, and in heavy demand. Barium products firm, the chloride is in rather better supply, but price remains unaltered. The carbonate and precipitated sulphate steady. Hyposulphite of soda moves briskly at late rates. Sulphate of copper lower: Anchor, 16l. 10s. to 16l. 15s.; Liverpool, 16l. 2s. 6d. to 16l. 5s.; January–March, 16l. 7s. 6d. Spirit of turpentine steady, and moderate business is passing. Nitrate of lead dull. Acetates of lead tending lower.

The Hamburg Drug market.

Our Hamburg correspondent writes on September 15:—Our market continues quiet and without much business. Antimony is again firmer, and quoted to-day 37½m. to 38m. per 100 kilos. Aloes, Cape: Unchanged, at about 50m. per 100 kilos. Acid, citric, best English, offers from 257m. to 260m.; Acid, tartaric, at 252m. per 100 kilos. Borax unchanged, at 36m. per 100 kilos. Balsam copaiba (Maracibo), at 3 25m. to 3 60m. per kilo. Balsam Peru quiet, at 14½m. to 15m. per kilo. Cinnamon very much firmer, with buyers at equal to 9½d. to 9½d. for usual assortment. Cassia lignea very firm, at 67m. for new crop, while holders of old crop ask a considerable advance. Cantharides: new 1896 flies are easier, at 375m. to 390m. per 100 kilos. Camphor (refined) is tending upwards at present; to-day's prices vary from 335m. to 340m. per 100 kilos. Coca-leaves (Bolivian) depressed, at 150m. to 175m. per 100 kilos. Cumin-seed (Malta) is offering to-day at 48m. per 100 kilos. Balsam (Tolu) is held higher, at 6m. to 7m. per kilo. Honey shows a quiet market, but there is some demand for Chilean and Peruvian of low grades at low prices. Menthol is again easier at 18m. to 19m. per kilo. Nux vomica continues quiet at 11m. to 11 50m. for Bombay. Kola-nuts are quoted from 65m. to 75m. per 100 kilos. Oils: Cod-liver oil is about unchanged, at 165m. to 170m. for non-congealing oil. Seal oil is steady at 48m. to 50m. per 100 kilos. Castor oil is scarce; first-pressing at 45m. to 46m. per 100 kilos. in barrels. Oils (essential): Peppermint oil, HGH is unchanged at 7½m. to 8m. per lb.; Japanese oil, 8½m. to 9m. per kilo. Star-anise oil steady at 20m. to 19m. per kilo. Cassia oil is steady: 80–85 per cent., 19m.; 50–55 per cent., 11½m. per kilo. Citronella oil quiet, at 270m. per kilo. Wax (Japan) very firm and dearer, at 76m. to 77m. per 100 kilos. Carnauba wax dull and neglected, grey at 140 to 150m., medium 165m. to 170m., yellow at 210m. to 220m. per 100 kilos.

London Drug Statistics.

THE following statistics relate to the movement of some of the leading drugs in the London public warehouses in the course of the first eight months of 1896 and 1895—January 1 to August 31. The statistics are supplied by the warehouses in question, and their accuracy cannot be guaranteed. It should also be noted that certain warehouses refuse to supply returns, and that several figures, notably those relating to oils of star-anise and cassia and to camphor, are therefore incomplete.

Article	Stocks		Imported		Delivered	
	1896	1895	1896	1895	1896	1895
Aloes.....cs, &c.	4,230	5,073	1,779	1,789	2,540	1,344
".....gourds	2,207	2,770	—	—	492	453
Anise, Star.....cs	222	393	3	41	52	124
Arrowroot.....brls	16,732	17,010	13,283	19,110	10,203	12,120
".....bxs & tins	2,078	1,759	932	1,138	913	1,745
Balsams (Medicinal).....cks, &c.	756	1,615	514	1,659	1,121	1,200
Borax.....pkgs	10	51	—	51	31	—
Calumba.....bgs	301	720	35	534	956	736
Camphor (crude).....pkgs	14,731	7,336	5,393	8,786	6,937	5,750
Cardamoms.....cs, &c.	426	1,214	1,493	2,450	2,044	1,968
Cinchona-bark:—						
S. American.....cs	56	62	—	—	2	2
E.I., Ceylon, &c. ....bils, &c.	15,157	17,661	2,158	3,527	4,250	5,654
and Java ....bils	264	305	228	211	234	97
Cocculus Ind. ....bgs	92.4	10,345	12,675	5,549	12,612	11,222
Cocculus Ind. ....tins	75	236	147	146	163	104
Cream of Tartar cks	5	—	9	17	9	17
Cubebas.....bgs	320	554	32	443	108	281
Cutch.....tins	1,969	2,119	1,487	920	1,230	1,585
Dragon's Blood ..cs	134	230	128	209	173	166
Galls, China, &c. ....bgs	1,661	843	1,881	1,362	727	1,028
Trky. & Prsn. ....bgs	8,105	6,759	6,415	4,07	3,267	5,323
Gambier.....tins	863	599	3,167	4,966	3,044	4,837
Gums:—						
Ammoniacum pgs	47	144	19	173	55	104
Anini & Copal ..cs	15,926	11,250	22,444	16,523	15,309	15,005
Acacia .."	15,451	12,613	19,725	15,291	15,190	13,131
Asafoetida .."	512	902	736	1,662	987	933
Benzoin .."	2,724	2,062	3,395	2,663	2,178	2,327
Damar .."	3,070	3,480	5,411	7,665	4,335	6,619
Galbanum .."	1	2	—	—	1	9
Gamboge .."	175	189	271	184	255	203
Guaiacum .."	58	83	76	58	75	91
Kino .."	21	19	13	21	6	19
Kowrie, tns (net)	970	2,055	1,760	2,178	2,228	2,277
Mastic ..pkgs	12	17	24	—	30	4
Myrrh .."	687	467	458	427	316	441
Olibanum .."	3,901	4,363	5,790	5,949	3,945	4,434
Sandarach .."	415	655	816	764	663	852
Tragacanth .."	4,440	4,420	6,624	5,477	4,163	4,804
Ipecacuanha:—						
Brazilian....pkgs	445	643	404	462	543	590
Colombian .."	9	23	94	93	129	162
Jalap	378	294	373	356	247	251
Lac Dye	2,739	2,900	—	—	55	12
Nux Vomica ..pkgs	725	1,755	524	2,414	897	1,591
Oils:—						
Anise.....cs	58	185	25	389	97	263
Cassia	20	59	33	44	44	119
Castor.....cks	120	94	790	339	751	331
".....cs	1,041	1,500	1,231	1,603	1,256	1,697
Cocoa-nut	215	1,107	1,173	2,789	1,702	2,450
Olive ..cks, &c.	1,209	700	2,317	1,281	1,553	1,673
Palm	76	11	115	55	49	49
Quinine salts ..lbs.	—	—	—	—	—	—
Rhubarb	395	982	316	1,087	844	1,20
Safflower	195	134	161	17	45	30
Sarsaparilla	296	351	695	865	665	851
Senna	1,168	1,900	1,747	2,419	3,176	2,877
Shellac, Orange ..cs	30,390	13,181	41,660	17,934	24,953	17,659
Garnet	6,778	8,976	6,178	13,415	5,283	6,233
Button	6,656	4,796	7,561	7,885	7,033	7,080
Total	43,824	26,953	55,393	39,234	37,274	30,972
Turmeric, Bengl. ....tins	649	629	93	481	200	29
Madras, &c."	487	651	95	578	246	444
Total	1,136	1,230	188	1,059	446	653
Vermilion	7	16	17	13	26	13
Wax (bees') ..bks&tins	588	1,529	1,63	3,376	2,150	2,223
Carnauba ..cks & cs	1,372	1,364	2,184	3,416	1,793	2,697
" (Japan) cs, &c.	73	823	111	425	6.9	849



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

The Alcoholic Strength of Vin. Aurantii, B.P.

SIR,—The question of the alcoholic strength and other characters of orange-wine of trade, raised by "Paddy" in your last issue, is an important one, and your inquiry for the results of recent observations on that wine most opportune. The greatest variation in price exists between different grades of orange-wine, manufacturers' prices ranging from 2s. 6d. to 5s. per gallon, with a corresponding variation in quality. The alcoholic strength of wines of these grades does not usually fall below that required by the Brit. Pharm.—viz., 10 to 12 per cent. of alcohol (your correspondent is in error in saying that the B.P. does not define the alcoholic strength of orange-wine)—but in other characters marked differences are observable. The specific gravities vary from 1.063 to 1.179, and the extractives, dried at 100° C., from 19.6 to 23.5 per cent. The following table shows the characters of three selected samples, one of each grade:—

	Manufacturers' Price per Gallon	Specific Gravity at 15° C.	Extractive Dried at 100° C.	Alcoholic Strength
1.	5s.	1.0790	Per cent. 23.5	P.c. by volume 11.17
2.	4s.	1.0724	21.0	11.17
3.	2s. 6d.	1.0633	19.6	13.4

All the wines examined contain preservative substances and their employment is according to most manufacturers a necessity. In the majority of instances sulphurous acid is the preservative used, in some salicylic acid, but the use of the latter has recently been discontinued, for obvious reasons.

For the preparation of a quinine-wine to answer the requirements of the Brit. Pharm., it is necessary that the orange-wine employed should have the official alcoholic strength. For a good orange-wine one might state briefly that the sp. gr. should not be below 1.070 nor the extractive under 21 per cent.

Yours faithfully,

Southwark, London, S.E.,
September 15.

JOHN C. UMLEY.

SIR,—Your correspondent "Paddy" errs in saying that the British Pharmacopoeia does not define the alcoholic strength of this. Under "characters and tests" I find it stated, "it contains 10 to 12 per cent. of alcohol," and a wine containing 5 per cent. only of proof spirit has certainly no claim to the title of a Pharmacopoeia preparation, however harmless and agreeable it may be as a beverage.

Yours very truly,

1 Cannon Street, Dover, September 12. J. F. BROWN.

SIR,—We note "Paddy's" report of his investigation of a sample of orange-quinine wine. This sample would, no doubt, have been made with a non-exciseable wine, and probably by someone who does not hold a wine-licence, and under no circumstance should we venture to send same out as B.P. We think you will find that the ordinary vinum aurantii of commerce will come up to Squire—viz., 10 to 12 per cent. of alcohol—for the very sufficient reason that an

orange-wine containing less than 19 to 20 per cent. proof spirit would be very likely to undergo a second fermentation, hence wine-brewers would not risk this when it is, with proper facilities, quite as easy to finish fermentation above as below this limit, and the cost being practically the same.

There is, however, a species of "wine" offered for quinine purposes which is simply water, sugar, spirit, and oil of orange, and a little colouring-matter. In this case it is, of course, necessary to keep the percentage of spirit as low as can be made to pass with the customers, and only by doing this can it get a chance to compete in price with genuine wine.

Yours faithfully,

Bournemouth, September 12. DOWDEN & CO.

SIR,—In answer to a correspondent, "Paddy," you invite recent examinations of orange-wine. It was my duty to examine some samples in 1895. *Vide the Medical Times and Hospital Gazette*, December 28, 1895. I selected a bottle bearing the name of a well-known maker, whose wine was in excellent repute to my knowledge thirty years ago. Such contained 12 per cent. of alcohol by volume. I compared this with another sample from a North Country firm. The second sample contained 23 per cent. alcohol by volume. The first indicates a natural wine, the second a fortified wine. Apart from alcohol I should prefer the fortified orange-wine, however made: it was brighter and sounder in every way.

Yours faithfully,

A READER. (168/56.)

"Punch" on Cutters.

Mr. George R. Barclay is good enough to send us a copy of last week's *Punch*, with the following lines marked:—

ALL VERY FINE AND LARGE!

(*A Straight Tip to Cutting Tobacconists.*)

Fine-cut tobaccos are all very fine,
But fine-cut profits make trade decline.
Honest small traders must fall at the charge
Of profits too small in shops too large.
Selling at cost-price, or at a loss,
Reduces business to pitch-and-toss;
And he is the CAIN among business brothers
Who seeks success in ruining others.
Would-be monopolists, this is no joke,
But something to put in your pipes and smoke!

"For 'tobaccos' read 'patents,'" is Mr. Barclay's comment.

Good old Gargle!

"The abolition of the gargle is advocated by Mr. Lennox Browne. There is a fine opportunity here for funny men of chemists' assistants' associations or for pharmaceutical poets."—*C. & D.*, September 12, 1893.

He entered the pharmacy sadly,
Said that his throat was sore,
And his uvula hurt him badly—
Was as rough as the mat at the door;
Asked us to make him a gargle.
We said 'twas impossible—quite :
Lennox says gargles are useless,
And Lennox Browne's sure to be right!
He left the show at the double,
And steered for the "Polar Bear."
Went in and stated his trouble;
And the "lady dispenser" there
Pretty soon mixed him a gargle
Of spirit, frumenti dil.
She never had heard of Lennox,
And probably never will.

Tunbridge Wells, H₂O DIL. (170/54.)
September 15.

Drug-contracts in Ireland.

SIR,—Will you kindly spare us space in your next issue to correct an impression that a report in your paper of September 12 must make? The Apothecaries' Hall is stated to have contracted for Birr Union, at prices given in issue of

above date. It is, perhaps, needless to go through the items seriatim, but we give such a statement that we ever contracted for cod-liver oil at 2d. per gallon a most emphatic denial.

In the same issue you report that we contracted for another union 75 per cent. above a local trader. Do the two statements tally? As regards the Rathcormac contract we were asked to tender for an Arnold's bag, and fail to see how a local man can give 75 per cent. off Arnold's list-price, which we quoted at. Contracting in Ireland is well known to be in about as corrupt a state as possible, and a matter of disgrace to public bodies; but we must ask you to allow us to protect ourselves against such statements as contained in your issue of September 12.

Yours faithfully,

For Governor and Company, the Apothecaries' Hall,
September 17. H. J. AUBREY.

DISPENSING NOTES.

Correspondents should consult "The Art of Dispensing" in regard to dispensing difficulties. Difficulties not explained therein may be sent to the Editor, who invites a general expression of opinion upon the under-mentioned topics.

Chian Turpentine.

168/18. *Cymro* wants to know how the following prescription should be dispensed. It is, he says, Clay's mixture of Chian turpentine for cancer:—

Chian turpentine	..	..	..	..	3ij.
Resorcin	..	..	..	..	3j.
Water	..	..	..	..	3vij.
Mix.					

A teaspoonful three times a day.

[Dissolve the Chian turpentine in $\frac{1}{2}$ oz. of absolute alcohol. Put 12 gr. of powdered tragacanth in an 8-oz. bottle; add the clear alcoholic solution to it; mix; then add 5 oz. of water, and shake well. Dissolve the resorcin in the rest of the water and add to the contents of the bottle. Shake well. Apparently, resorcin has now taken the place of the sulphur first used. The above mixture and a box of pills were charged 10s. by a Birmingham chemist, "Cymro" says, yet that is where anti-cutting schemes are hatched!]

The Acetate-of-Iron Mixture.

SIR.—"Yorks'" iron mixture is similar to one I have frequently dispensed, but I have seen tr. fer. perchlor. used, which I think "Yorks" will find makes it about the desired colour.

G. W. (171/9.)

164/15. *Micro*.—Use theriacanth (see "The Art of Dispensing") for massing the pil. hydrarg. and species of pil. thei co.

163/8. *Glycerine*.—There is no danger in mixing glycerine and potassium chlorate if they are pure.

MISCELLANEOUS INQUIRIES.

N.B.—All queries should be accompanied by the business card of a subscriber, or the address label from THE CHEMIST AND DRUGGIST wrapper. We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

NO SAMPLES will be analysed and reported upon unless the sender labels the sample with his name and the name of the article, and informs us (not necessarily for publication) by whom the article is made, for what purpose and how it is used, and any further particulars of interest. We do not undertake analyses which are of interest solely to senders of samples. Back numbers containing formulae, educational or other specific information can be obtained from the Publisher.

164/27. *Cistor*.—Gazogenes and seltzogenes are the same thing. See our issue of August 31, 1895, page 366, for 3 and 5 pwt charges.

164/31. *Derfla*.—The Salisbury Cure is, we suppose, the obesity treatment which the Marquis of Salisbury was put on. It consisted, as far as we can recollect, of a good deal of walking up and down stairs, grilled beefsteaks without vegetables, no sugar, and as little carbohydrates as possible, and a modicum of whisky or brandy in lieu of viues. Nevertheless, the marquis appears to be as bulky as ever.

164/34. *J. F.*—Gould's "Aerated-water Makers' Manual," just published in a revised form by J. G. Smith & Co., Queen Victoria Street, E.C. (5s.), may suit you. See "Aerated Waters, Cordials, &c." (Stevenson & Howell, 2s. 6d.), in regard to the compounding of syrups.

163/54. *Almanack*.—To Perfume Almanacks sprinkle the perfume on blotting-paper and put the almanacks and paper, layer by layer, in a well-closed box. Keep them there until you wish to send them out.

163/30. *P. M.*.—The identification of botanical specimens for individual correspondents is not a matter of interest to our readers generally, and does not, therefore, come within the scope of this column. Hooker's "British Flora" is a book which will suit you. It is published at 10s. 6d.

164/40. *Student*.—You will find the questions given in the Bell scholarship examination in our issue of July 18. Roscoe's "Primer of Chemistry," Cripps's "Galenic Pharmacy," and "Bentley's Small Book of Botany," published by the S.P.C.K., are suitable books for reading up.

164/71. *G. G.*—Non-exciseable Ginger-wine Essence.—See the 1894 DIARY, page 364.

164/51. *Aris*.—Polish for the Feathers of a Black Pigeon.—Try a brilliantine made of ol. ricini 3j., ol. rosae gerani. m.v., iu S.V.M. 3j. To be brushed on; but very little should be used.

164/54. *Sartor* tells us of a customer who has some artificial grey hair which has turned brown in colour. What will bleach it? Steep it in a mixture of liq. potassæ 3ij., aq. Oj., for an hour; then in water, next in hydrogen-peroxide solution, and so on alternately until the point of greyness is reached.

164/65. *H. A. S.*—See reply to "P. M."

164/24. *Household*.—Non-poisonous Nursery Ointment:—

Ol. staphisagriae	..	..	..	..	3j.
Ol. olive	..	..	..	..	3j.
Paraf. dur.	..	..	..	..	3j.
Vaseline	..	..	..	..	3v.

Melt, and perfume with—

Ol. bergam.	..	..	..	..	m.v.
Ol. ros. geran.	..	..	..	..	m.v.

162/45. *Cantab.*—Camphor-ice for 1d. boxes:—

Camphor-flowers	..	..	..	..	3j.
Hard paraffin.	..	..	..	..	3iiss.
White petroleum oil (heavy)	..	..	..	..	3iv.

Melt the paraffin in the oil by heat, add the camphor, dissolve quickly and cast into a slab. When cold, cut into pieces of the desired size.

155/25. *Mold*.—The only way to make bones available for manure is to crush them and treat with sulphuric acid; but we do not expect that your customer has the necessary convenience for treating a few tons of bones chemically. His best plan would be to use them in the coarsely-powdered state.

162/4. *Roylat*.—(1) Bisulphite of lime is not a good preservative for syrups and cordials, because the sulphurous acid changes many flavours. Salicylic acid is better. Use it in the proportion of 90 gr. to the gallon. (2) Tragacanth added to cordials only increases the liability to fermentation in respect to the fact that it is a carrier of microbes. You should make the mucilage with boiling water, or heat the tragacanth in a dry oven for an hour before compounding it.

154/38. *Coumarin* writes:—“(1) The ‘United States Dispensatory,’ 17th ed., page 446, under copaiba, says, ‘For a description of an apparatus for distilling the volatile oil, see a paper by R. A. Cripps in CHEMIST AND DRUGGIST, 1892, page 282.’ I do not find any reference to copaiba on the page named. Would you kindly direct me to the article intended?” The note is on page 282 of our issue of August 22, 1891. It was on “The Estimation of Volatile Oil of Copaiba,” and was communicated to the British Pharmaceutical Conference. (2) The best diluent for strong opium is the tincture-marc, partially exhausted with water also, and dried.

157/21. *H. S. F. B.*—*Eau d’Arquebusade*.—See *C. & D.* December 14, 1895, page 876.

157/7. *G. & Co*.—You will find all the formulae which you require in the current and last two volumes. These you can refer to in the local pharmaceutical library.

153/25. *Elvardus*.—We could not improve upon the mixture, except to reduce the quantity of squill syrup, which sometimes irritates the kidneys. Replace half of it by as much tolu syrup.

161/59. *Examination*.—No. See the Educational number.

159/50. *R. B.*—The Skin ointment consists of—

Ichthyol.	..	..	..	..	..	5ij.
Vaseline	..	..	..	..	..	5vj.

155/64. *F. J. G.*—Bottling Mushrooms.—See page 61, July 11, 1895, and page 94, July 18, 1895. Use white vinegar.

153/56. *Scalded Milk*.—A trace of lemon would cover the burnt taste in scalded milk, but would be objectionable in other ways. Why not suggest sterilising by steam heat?

155/72. *Enquiry*.—(1) Shellac is best for fixing pestle to handle: make both parts hot, pour in the melted shellac and keep close together till cold. (2) We cannot say when the new B.P. will be out.

154/34. *Carrick*.—(1) Oxidation of the iron and caramelisation of the sugar account for the change of colour in Easton’s syrup on keeping. Hypophosphorous acid is sometimes used, with the object of delaying the change. (2) *Syr. Hypophosph. Co.* We have several times published the following:—

Sadli hypoph.	..	..	..	..	gr. xlvi.
Ferri phosph., U.S.P.	..	..	..	..	gr. xv.
Mang. hypoph.	..	..	..	..	gr. v.
Quin. siph...	..	..	..	..	gr. v.
Liq. strychn., B.P.	..	..	..	..	5j.
Sp. chlorof...	..	..	..	..	5j.
Syrup al...	..	..	..	..	3xiiiss.

Dissolve the first four salts in 1 oz. of water by heat; add the liq. strychn.; filter on to the syrup and spt. chlorof.

153/45. *Rusticus*.—(1) Oil of Balm is the oil of melissa officinalis. (2) Rubber-tyre Cement (in collapsible tubes) is a saturated solution of indiarubber in benzine or carbon bisulphide.

159/35. *Carlo*.—(1) However can you make an oleate of an acid? (2) Best way to mix the following White Liniment:—

Ol. terebinth.	..	..	..	..	..	3xxvij.
Ol. nucis	..	..	..	..	..	3xvij.
Pulv. camphore	..	..	..	..	..	3v.
Ac. acetic.	..	..	..	..	..	3viiss.
Ovi vitelli	..	..	..	..	..	vi j.
Aq. dest.	..	..	..	..	..	3xxiis.

Dissolve the camphor in the turpentine and oil; add to the egg-yolks in a mortar; then, vigorously stirring, add gradually the water, and, lastly, the acid.

159/51. *G. C.*—Samples of Colour-feed for Birds.—Your approximate compositions are nearly correct, except that No. 2 contains some alkanet. See a reply on colour-foods to another correspondent last week.

159/42. *York*.—See note to “*Rusticus*” (153/45).

159/48. *J. R. C.*—The Polishing-paste is a natural earth made into a paste with paraffin oil. Fine kieselguhr would be a suitable base to use.

159/30. *Salol*.—Your ointment is a sort of Lanoline Cold Cream:—

Lanolini	..	..	..	..	..	3vj.
Oetacei	..	..	..	..	..	3vj.
Cerae albae	..	..	..	..	..	3vj.
Ol. amygd.	..	..	..	..	..	3x.
Aq. rose	..	..	..	..	..	3vj.
Otto rose	..	..	..	..	..	3lxxv.
Ess. bergam.	..	..	..	..	..	3lxxv.

Melt the spermaceti and wax (previously shredded) in a water-bath; add the lanoline and oil. When melted remove from source of heat, add the water and perfume, and stir till cold.

281/11. *Smilax*.—You cannot do better than use lin. crinale (Squize) in the case of Hair Falling off you mention. It is better, however, to dilute it with an equal quantity of S.V.R., as in some cases much irritation has been caused when using it full strength.

155/20. *Model*.—You can make a good Modelling-wax for taking a cast of the hand by melting together hard paraffin, 10 oz.; Venice turpentine, 1 oz.; lard, 2 oz.; and stirring into the mixture while hot sifted kaolin, 6 oz.

158/61. *Subscriber (Bombay)*.—(1) We shall inquire. (2) Owen’s “Practices of Perfumery” was a compilation of recipes which we should think is out of print. Askinson’s is one of the best modern works (see page 319). Our 1895 DIARY gives as many formulæ and less padding than these big books. (3) We have no label for Compound Syrup of White Pine. You might say, however, something to the following effect: “A celebrated American remedy, possessing agreeable balsamic properties; is a valuable emollient and expectorant in chronic bronchitis and other troubles of the air-passages, and is free from injurious properties.”

153/17. *E. D. M. (Victoria)*.—The crystallisation of quinine from Liquor Eassoni is not uncommon here during the winter-time. This has been found to be due mainly to the large excess of acid in the solution, and it is desirable that the acidity should be kept always the same, and not excessive. See a note on the subject in the *C. & D.*, vol. xlii., page 373.

153/31. *Smudger (Pernambuco)*.—For Black Ink see our issue of May 30, page 779. This you have, we presume. Blue-black Ink.—See the formula in our issue of August 22, page 329, but instead of indigo use methyl blue 3ij. as a colouring, and to the iron solution add acid sulphuric dil. 3 s. We prefer the ink coloured with methyl blue, and the sulphuric acid prevents precipitation.

157/45. *Verax*—We presume that the solution is one of an aniline colour, and the solvent a highly volatile liquid, the rapid evaporation of which makes your customer think that it sinks into the glass.

160/13. *Ajax*.—The Milk-preservative is the usual mixture of borax 2 parts and boric acid 1 part, mixed, allowed to become moist, then dried and powdered.

160/20. *Dentifrice*.—Armenian bōle is a perfectly safe addition to tooth-powder, and does not blacken the teeth.

160/33. *Pharmacist*.—(1) Concentrated Infusions.—See the paper in our issue of December 14, 1895, page 857. (2) Let us know what formula for liq. sangu. co. you have tried, and if you adhered strictly to the instructions.

160/17. *Enamel*.—Black Japan.—Melt 48 lbs. of asphalt in the set-pot, and add 10 gallons of linseed oil. Run in the gum-pot 8 lbs. of gum arami, and mix with it 2 gallons of linseed oil. Pour this mixture into the set-pot. Then run 10 lbs. of amber and 2 gallons of oil in the same way; add this to the set-pot mixture, then boil for three hours, adding 7 lbs. of red-lead, 7 lbs. of litharge, and 3 lbs of copperas during the time, and continuing the boiling until a portion of the mixture on removal sets hard. When cold enough, thin it with 30 gallons, or more, of turpentine. It is in this way that bicycle-enamels are made; and you will perceive that it requires special skill and training in making them. Our advice to you is: Buy, and do not try.

160/73. *F. Bakes*.—As to bird-colourings, see reply to "R. C. N." last week.

163/27. *J. B.* asks: "What is the difference in action between mineralised and non-mineralised Methylated Spirit if taken internally?" [There is little difference. Paraffin oil, if taken by the ounce, acts as a narcotic poison; but before a methylated-spirit drinker can get that length he would be killed by the pure alcohol and naphtha impurities in the liquor.]

163/32. *Lavender*.—An answer to a similar question is given to another correspondent.

163/64. *Phanix*.—(1) We have the matter in hand. (2) Query inserted. (3) We presume the lotion is a solution of calcium sulphide, but we have not examined it. One or two simple tests will tell you. See whether sulphuric acid precipitates calcium sulphate and disengages sulphuretted hydrogen.

109/49. *Senex*.—We have published several formulæ for *Liq. Bismuthi Co. c. Pepsin*, and here is another from *Armour's* formulary, which works very well:

Glycerole of pepsin (Armour)	..	..	2½ oz.
Ammonio-citrate of bismuth	..	..	320 gr.
Acetate of morphine	..	..	8 gr.
Diluted acetic acid	..	..	16 min.
Tincture of nux vomica	..	..	800 min.
Dilute hydrocyanic acid	..	..	400 min.
Proof spirit	..	..	1 oz.
Tincture of cochineal	..	..	sufficiency
Simple liquor to	..	..	1 pint

Mix the glycerole of pepsin with 2 oz. of the simple liquor, and carefully neutralise the mixture with a weak solution of ammonia. Dissolve the ammonio-citrate of bismuth in 10 oz. of the simple liquor, adding solution, if acid, by neutralising with ammonia. Mix the acetic acid, the proof spirit, and 1 oz. of the simple liquor, and dissolve the acetate of morphine in the mixture. Mix the three solutions, add the tincture of nux vomica, hydrocyanic acid, and sufficiency of the simple liquor to produce 1 pint. Colour with the tincture of cochineal, and filter.

Dose: Half to 1 fl. dr.

Simple liquor is a mixture of tr. auranti: recent. 16 oz. syrup 2½ pints, and aq. dest. to 6 pints.

Disgusted L.P.S.I., who writes in regard to Mr. Turkeston's motion at the Council meeting of the Irish Pharmaceutical Society this month, must give us his name and address before any part of his letter can be inserted.

170/11. *Southerner* would be glad of information as to the composition of Smith's Glasgow Mixture, inquired for by a medical man. [This is a preparation much favoured by medical men in certain parts of the country for relieving "that tired feeling" which comes on after the day's work is over. The mixture is taken by inhalation only. It is exhibited in two forms, and consists, apparently, of two or more varieties of the leaf of *Nicotiana Tabacum*, cultivated in the Southern States of North America, and prepared and incised in this country. The cheaper mixture contains a larger proportion of the black or fermented leaf than the other kind, which is called "Sun-cured." We do not suppose that the mixture differs chemically from any other, but we know some medical men who say that they can never get such satisfactory physiological effects from anything as they get from this peculiar mixture when inhaled through a Löwe briar.]

164/15. *Garrod*.—Garrod's "Materia Medica" is not a suitable book for pharmaceutical students. Southall's is the thing. See our Educational Number.

168/32. *September*.—Excessive Scurf in the Head.—We fancy your customer is not a very cleanly person, and perhaps does not appreciate as well as he might the superiority of personal hygiene to medical treatment. For the immediate removal of the "nits," and partial suppression of the scurf, give the following lotion:—

Resorcin.	..	..	..	..	..	5iss.
Glycerin. boracis	..	..	..	..	..	3j.
Tr. quassie	..	..	..	..	..	3j.
Spt. rectificat.	..	..	..	..	..	3ii.
Aq. rose ad	..	..	..	..	..	3viiij.

M.

To be brushed on the hair every morning.

At bed-time, nightly, he should wash the head with tepid water containing a teaspoonful of borax, and use only sulphur-and resorcin soap. No plain-water douche should be used after this washing, as it is desirable to leave some of the medicament in contact with the skin and hair. The scurf seems to get worse the first week this soap is used, but thereafter it begins to improve. No oily dressing is to be used for the hair, only the above lotion.

168/36. *W. P.*.—We have several times reported on the powder for drunkenness, the last occasion being on May 16, page 711, to which please refer. A little capsicum may be added, but it is right that we should say that anything you can put up will not equal in efficacy the original: there is something in it which cannot be got at by analysis.

165/52. *Flotcher* is an invalid chemist, who asks us if we think it possible that he might, by advertising or application to wholesale drug-houses, be able to get some light home work to do. We think it not unlikely, but the work which can be done at home is somewhat limited. Making suppositories, folding powders, and bottling perfumes are a few of the things which might be done neatly at home, and are done quietly by some retailers for their wholesale friends. If "Flotcher" can satisfy any who wish this sort of work done that he can do it well, he may get sufficient of it to keep him from wearying, and to help keep the pot boiling. At all events, he should try what an advertisement in our Supplement will bring him.

152/17. *H. R.*—(1) We last published the original formulæ for Parrish's syrup on February 23, 1895, page 300. (2) Jørgensen's "Micro-organisms and Fermentation" is the more recent of the two books you mention, the other one being twenty years old.

153/13. *H. G*—Carbon-paper.—Grease unsized paper with castor oil dissolved in methylated spirit, and rub it with lampblack.

154/26. *J. E. H.*—(1) Soothing-syrup resembling your sample:—

Tinct. asafotidae	..	..	..	..	3 <i>j.</i>
Ol. anethi	..	..	..	..	3 <i>vij.</i>
Syr. violae	..	..	..	..	3 <i>ij.</i>
Syrupi ad	..	..	..	..	3 <i>vj.</i>

Dose for a child, one month old, 10 drops; three to six months, half a tea-spoonful; above six months, a teaspoonful.

(2) Green Corn-paint.—See *C. & D.*, January 26, 1895, page 117. (3) White Liniment.—1896 DIARY, page 229.

154/72. *Country*—The *Dog*. pills consist of asafotida made into pills with treacle and powdered liquorice.

150/70. *Noswali*.—You do not give us sufficient details about your eczema-powder to warrant us troubling to analyse it.

165/40. *Ajax*.—(1) Pure Animal Oil is Dippel's oil, or *oleum animalis rect.* It is obtained by the destructive distillation of bones, as in the manufacture of bone-black.

(2) Dulcified Spirit of Salt is an old preparation, spirit of ethyl chloride, made in the same manner as sweet spirit of nitre, hydrochloric acid taking the place of nitric acid. Both articles can be obtained from most wholesale houses.

165/62. *J. B. B.*—We have seen an article called *Parazene*, used for bleaching, which is, as you imagine, a solution of chlorinated lime. The last time we heard of it was from Edinburgh, where it is sold at a few pence a pint.

166/31. *Epsilon*.—Bennett, Sons & Shears' auto-still is a good one for distilling water. There is little to choose between it and the one described in our issue of August 29, page 342, except the cost. Write to the above-named firm for particulars of both.

166/14. *Radix*.—(1) You may add a little chloroform to the Malt-extract and Castor Oil, or even salicylic acid in the proportion of 2 gr. to 1 oz., in order to prevent the fermentative change which you refer to, if it is such a change. But we should try another malt-extract. The one which you have seems to be exceptionally acid, since it effervesces with soluble saccharia. That effervescence is due to the liberation of carbonic-acid gas. (2) We do not know any better guide to the Mincing Lane markets than the weekly reports in THE CHEMIST AND DRUGGIST.

166/12. *Winter*.—Camphor.ice:—

Oil of almonds	..	..	..	..	..	3 <i>iv.</i>
Spermaceti	..	..	..	..	..	3 <i>vij.</i>
White wax	..	..	..	..	..	3 <i>iv.</i>
Camphor	..	..	..	..	..	3 <i>j.</i>

Melt the first three together over a water-bath, add the camphor, and stir until dissolved; then pour into moulds of the size and form required.

166/36. *Manxman* (N.Z.).—(1) Acid for Wine essences.—Acetic, citric, and tartaric acids are those generally used—the first always in concentrated raspberry-vinegar, and the last in ginger-wine essence. There is not much fear of acetic ether being formed in objectionable quantity when acetic acid is used, although that does take place in the cold when more than 30 per cent. of acid is present along with spirit. Tartaric acid is, on the whole, the best for wine essences generally. You will find some notes on the subject in our 1894 DIARY. (2) Cement.—Soak 1 oz. of isinglass in 4 oz. of distilled water until soft, then pass it through a coarse sieve to keep back any fibrous tissue. Put the siftings in a gall-pot with 1 oz. of acetic acid, and

heat on a water-bath until reduced to 3 oz. (in weight); then pour into bottles.

165/58. *Inquiry* is 22*½*; four years' experience in the trade, in two shops (mixed and high-class businesses); good dispenser; knowledge of photography; unqualified, but well advanced in his studies. What are his services worth? We should like to hear what his last employers say before we decided seriously, but he will not be far wrong in asking 30*l.* indoors, or 25*s.* per week outdoors.

165/68. *Essex*.—Fly-powder:—

White-lead	..	..	..	..	..	1 lb.
Fullers' earth	..	..	..	..	..	1 lb.
Black sulphur	..	..	..	..	..	8 oz.
Crude carbolic acid	..	..	..	..	..	2 oz.

Mix the whole intimately.

168/10. *T. P.*—We presume that your rather enigmatical card has reference to the recent investigations which have been made regarding the specific micro-organism which assists leguminous plants in the work of assimilation. As to that, you should write to the Secretary of the Royal Agricultural Society, 13 Hanover Square, London, W., who may put you on the track. Our interest in agriculture is amateurish.

167/5. *Spes*.—To clean oil-paint pictures and the frames wash them gently with warm water, to each pint of which you have added a teaspoonful of ammonia solution and a tablespoonful of methylated spirit. As one lot of water gets dirty use another, but not more than three waters. After that, plain warm water.

167/28. *Z. Y. X.*—We heard an expert in frozen meat say some time ago that there is a fortune to the man who will discover a process to prevent such meat becoming clammy, &c. We have not yet made our fortune, so we cannot give you the information. In other words, we don't know, nor does anyone else.

169/52. *Phenazonum*.—You should apply to the College.

169/8. *Studio*.—You must join the Society not later than the beginning of the year in which you are to compete for the Bell scholarship.

170/23. *J. B.*—The best way to clean mercury is to redistil it. If you cannot manage that shake it with several times its bulk of dry plaster of Paris, then filter through chamois.

INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

164/63. Will *J. M. H.* (Salop) please communicate with us?

168/72. *Phytolacca* tablets: what are they, or where obtainable?

6/24 Description of the Douglas-Woolridge eye-testing apparatus, or where obtainable.

171/45. Maker of "Derby Dog-biscuits."

Mr. James A. Reid, chemist, Helensburgh, will be obliged to any chemist who will let him know the present address of Captain Coe Murchison.

Mr. C. A. Higgins, pharmaceutical and photographic chemist, Bull Green, would like to get the present address of a travelling photographer named Bloomfield, late of Halifax, formerly of Sheffield.

